

REGIONAL ACCENT DISCRIMINATION IN THE HIRING PROCESS: A
LANGUAGE ATTITUDE STUDY

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Evidence is presented to support the notion that US regional accents influence decisions in the hiring process. Fifty-six people who hire for a variety of corporations participated in a computerized survey, during which they listened to speakers from regions of the US reading the same passage. Respondents judged the speakers on personal characteristics commonly considered in hiring decisions, attempted to identify the speakers' regions, and selected job categories for each speaker, in addition to providing information about their own linguistic security. Results indicate: 1) judgments based on regional accents strongly correlate to selection of job categories, 2) respondents were not able to identify regional accents correctly, and 3) negative judgments were assigned to the speakers of accents that were correctly identified.

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REGIONAL ACCENT DISCRIMINATION IN HIRING DECISIONS: A LANGUAGE ATTITUDE STUDY

Every time we meet a person, we make assessments of and judgments about that person. Obvious factors such as overall appearance, dress, posture, and cleanliness give us clues about the person's background and state of mind. Spoken language provides another wealth of information. Combining all the clues, we judge a person to be friendly or unfriendly, aggressive or docile, and even sane or insane. Whether or not we are deriving correct conclusions from our assessments, we nonetheless reach them and often act on them. Because language is a major factor in those judgments, it is appropriate to study and understand which aspects of spoken language have the greatest effect on our reactions to each other.

Such studies are called language attitude studies and through them linguistic researchers have amassed a great deal of information about our reactions to the language used by our fellow humans. The studies focus on aspects as specific as the pronunciation of a particular word or set of words and as broad as entire dialects within and between language communities.

One aspect of spoken language that affects every speaker and listener of English is accent. Accents are patterns of pronunciation that identify speakers with particular groups, and they vary in many ways. A good working definition of accent was created by Rosina Lippi-Green (1997, p. 42): "Accents are loose bundles of prosodic and segmental features distributed over geographic and/or social space." Those who learned English as a

second language often have pronunciation patterns that are described as “foreign” accents. Ethnicity is another common accent influence. Yet another is regional accent, those patterns of pronunciation that are common to a particular geographic area of the country, which is the focus of this study.¹

Verbal interaction between speakers of English provides the participants an opportunity to learn a great deal about each other: both from the words spoken and the meanings conveyed and from the speech patterns they use. If a participant comes to the interaction with previously formed ideas about particular speech patterns, then the listener may apply those notions to the interaction in a discriminatory way. Such discrimination may not be particularly harmful in many of our interactions with each other. But, when the discrimination of the listener results in actions or decisions that are important to the speaker, those discriminations are important.

One type of verbal interaction that is always important to the speaker and that provides an excellent vehicle for discrimination based on a speaker’s accent is an employment interview. During the interview, the employment candidate attempts, through verbal performance, to convey competence and confidence. The goal for the candidate is to be offered the position. The goal of the interviewer is to select an employee who will be successful and productive in the organization, and to eliminate all but one candidate for each position available. The interviewer attempts to compare the candidate’s background, experience, education, and qualifications to those of other

¹ This project was made possible by funding provided by The Trice Foundation and equipment provided by IBM.

candidates with objectivity; however, other factors influence the decision to hire or not hire, and those factors may be purely subjective and may be dangerously discriminatory (Kinicki & Lockwood, 1985). One of those factors is the accent with which the candidate speaks English.

“That young man is delightful and is obviously very bright. Too bad I can’t hire him, but there is no way I can put him on the telephone with my customers. His accent is too strong.” That comment was made about a young man who was 22 years old, had a 4.0 grade point average in a technical field at a major university, and was born and raised in a small Texas town.² In this case, his accent was the obvious disqualification for employment. In other cases, the accent is not necessarily identified as the reason for not hiring a candidate, but it may be insidiously affecting the outcome of the employment interview.

Linguists have conducted numerous studies concerning the existence of an ideological standard that provides a basis for the judgments people make toward speakers of English (Labov, 1966, 1969, 1972; Lippi-Green, 1997; Milroy & Milroy, 1985; Preston, 1989, 1996, 1998). Such an ideological standard eludes the confines of a specific definition, but is perceived as a reality by so many that it has even been named.

² The author of this report is the Director of Cooperative Education at the University of North Texas, a program in which students are placed into employment in order to gain experience in their major fields of study. She has worked with students seeking employment and employers seeking to hire students for over 20 years. The anecdotal evidence presented in this report, unless otherwise noted, are from her personal observations and experiences.

Significantly, it has been given many different names, an indication that its actual identity has remained mysteriously at large. We know it is “out there” because so many seem to have heard it, believe they would recognize it if they heard it again, and are quite certain that they can correctly identify those versions of spoken English that are not it. It has been called General American, Standard American, Standard US English, good English, and Mainstream US English, all of which are terms that are meant to exclude those versions that are implied as opposites or outside the boundaries the terms attempt to impose (i.e., nonstandard, bad, non-mainstream, irregular, not generally accepted as standard, not conforming to the ideal). Some people claim to know where this elusive standard resides, which is somewhere in the northern part of the Midwestern region of the US. However, an investigation of this area finds several “suspects” that fit the various reported descriptions to some degree, yet are distinctly different from one another. Almost all who know of its existence agree about one thing: they definitely know where it does not live. It does not live in either the Southern US or in the Northeastern US, and it does not reside in any ethnic community or within any speaker who has acquired English as a second language.

Some noted linguists, such as Lippi-Green (1994, 1997) and Preston (1989, 1991, 1998), claim the standard ideology is merely a mythical illusion that cannot be captured because it does not exist. Matsuda (1991), a Professor of Law, has argued against the existence of a standard English pronunciation authority in accent discrimination issues before the US Court of Appeals. Yet, those experts still agree that the myth is so well incorporated into the American culture that it has been accepted as real and has been

given the power and authority to act upon us. Whether or not it actually exists is secondary in importance to the perception that it exists when that perception forms the basis for discriminatory judgments to be made by one speaker toward another, then provides a convenient justification for those discriminatory judgments. Those speakers who do not have “it” are frequently judged negatively, even by themselves. Lippi- Green (1997) states:

When persons who speak languages which are devalued and stigmatized consent to the standard language ideology, they become complicit in its propagation against themselves, their own interests and identities. Many are caught in a vacuum: When an individual cannot find any social acceptance for her language outside her own speech communities, she may come to denigrate her own language, even while she continues to use it. (Lippi-Green, 1997, p. 66)

This contradictory tendency has also been recognized by Labov (1972, p. 311) when he noted that, “Speakers who use the highest degree of a stigmatized speech feature in their own natural speech show the greatest tendency to stigmatize others for their use of this form.” Matsuda (1991, p.1329) asserts that a person’s accent is an integral part of self identity and that “Someone who tells you they don’t like the way you speak is quite likely telling you that they don’t like you.”

Negative judgments toward accented speech have been measured in a variety of ways, but how do those judgments actually affect us? Do those negative judgments make any real difference in our lives? This study was conducted determine one difference such

judgments may make in the lives of almost all speakers of English: all those who seek employment at some time in their lives.

Threats of dire consequences of speaking English with a foreign accent are promoted by businesses that profit from such warnings: accent reduction enterprises. Such threats tie accent to decreased worker productivity, decreased customer satisfaction, decreased revenues, and increased costs of operation, to name a few. Their advertisements are intended to elicit employers to pay for instruction for their foreign-accented employees that promises to “reduce” their accents. The underlying implication is that to reduce the accent is to avoid the negative consequences that are associated with having employees who speak with foreign accents. Accent-reduction operations are businesses that intend to make a profit. To do so they rely on emotional responses rather than a rationale supported with empirical evidence, but the fact that they succeed is an indication of how vulnerable speakers of English are to the judgments of themselves as well as others.

Is accent discrimination illegal? Perhaps it is not. Matsuda (1991) investigated several lawsuits where plaintiffs had complained of accent discrimination. These involved speakers of English as a second language. It is expressly forbidden by Title VII to discriminate based on national origin. Accent could logically be considered an indicator of national origin, which would logically lead to the assumption that discrimination based on accent is illegal. Yet, to date, U.S. courts have not found in favor of plaintiffs who have complained of accent discrimination in the workplace (Matsuda 1991). Despite the testimony of linguists on behalf of the plaintiffs, the courts have

consistently used their own personal opinions of the speakers' accents to determine their findings. The legal protection against accent discrimination for immigrants to the United States, it seems, is merely an illusion.

In a review of legal decisions involving accent as a basis for discrimination regarding national origin, Cutler (1985, p.1164) points out that, "As it is now enforced, Title VII cannot keep its promise of individual equality; it actually perpetuates discrimination against the least assimilated members of a national origin group." In other words, employers are allowed to reject qualified candidates who have "stronger" accents in favor of those who have "better" accents as long as the employer does not specifically discriminate based on a particular national origin. Unfortunately, discrimination against speakers with foreign accents seems to be legally acceptable.

In the United States, many regional and ethnic varieties of spoken English thrive. They are commonly referred to as accents. Those accents are not afforded even the illusion of protection by the legal system because they are not associated with national origin, but rather with a region within the nation or an ethnic group within the nation. In fact, a recent decision handed down by the Eleventh Circuit of the US Court of Appeals implies that ethnic accent may be a perfectly legal reason to discriminate when making job assignments. In *Ferrill v. The Parker Group* (1999) an African-American employee filed a suit claiming that the firm had made job assignments based on race. The Parker Group is a telemarketing firm that had been hired by a political candidate to call prospective voters. The firm "race-matched" callers with voters, assigning black

employees to call black voters and white employees to call white voters. Each group of callers used a different script. Because the job assignments were based on racial stereotypes that assumed an employee's race would enable her to perform a more effective job when speaking with a voter of the same race, the court found in favor of the plaintiff. However, in a footnote accompanying the decision, the court explained that if the defendant had used accent, speech pattern, or dialect as the basis of assigning work rather than race, that criteria would have been acceptable and the court would not have granted judgment against them.

Some evidence concerning the effect regional accents have in the hiring process is presented in this study. Accent prejudices may be influencing the outcome of the hiring process, even if the interviewer makes a conscious effort to avoid discrimination toward candidates for any of the reasons prohibited by federal law such as race, ethnicity, national origin, religion, or physical limitations. Perhaps interviewers attribute particular personality characteristics to people who have certain accents. Perhaps they cloak those prejudices behind the justification that others in their organizations or their clients will have negative reactions to certain accents. In order to bring accent discrimination in the hiring process to a level of awareness that may lead to recognizing it as another form of illegal discrimination, we must first find a way to document its occurrence other than through anecdotal evidence. Anecdotal evidence does, however, help to identify the potential harm of accent discrimination, as the following examples will illustrate.

In one case, a university instructor refused to fly with a particular airline even though the fare was extremely low because when she called to schedule the flight, a man with a

Southern accent answered the phone. She could not bring herself to book that flight because the man identified himself as the pilot of this very small operation, and she just could not trust her life to someone who sounded so “Southern.” It is interesting to note that she was teaching linguistics at a major university in Texas at the time of this event.

At another large university in Texas, the director of the placement and student employment center went in search of a person without a Texas accent to record the answering machine’s outgoing message so callers would not think poorly of the university or the office when they heard the message. The native Texans who worked in the office and who were rejected for this task were highly offended. They believed their supervisor had insulted their heritage, culture, intellect, and the essence of their identities because of her absolute rejection of their Texas accents.

A young woman who was in tears and extremely angry was observed while she was standing outside an office building with a co-worker, discussing the cause of her distress. It seems her boss had humiliated her in front of her co-workers by correcting the way she pronounced “oil.” The young woman pronounced the word “ohwel” [:l] and the boss informed her that it should pronounced “oyel” [oyl] and had told her that her accent made her sound stupid. The woman was so upset she was considering resigning from her job, even though she worked in an office where the other workers spoke with the same accent she does, and the boss was the one who was “different.” “She thinks she is so holier-than-thou-smart because she sounds like a Yankee instead of a Southerner,” the co-worker replied in an attempt to comfort the woman.

A woman executive with a major national firm made a formal presentation to a large audience. Afterwards, a man with whom she had worked for many years came up to her and congratulated her on an excellent presentation. He then added a statement to the effect that he had no idea that she could sound “smart” when she wanted to. She explained that she had been using formal English during the presentation and that he had only heard her in informal situations before that. He insisted that her accent had made him assume she wasn’t as smart as she obviously was. She was from a Southern state. Prior to joining that corporation she had been a practicing speech pathologist! She related this story to me as an example of why she thought this project was important.

A corporate recruiter was discussing the project that is the subject of this report with me. I asked him if he thought accents make a difference when he hires people. He answered that accents do indeed make a difference in the hiring process, and went on to say that only the week before he had rejected a candidate because he had a “strong Cajun sound.” He explained that the accent made the candidate (an accomplished engineer) too difficult to understand. “There was no way I would hire him.” He explained that his company simply would not accept someone who sounded like that and would not want a person with that accent representing the company to their clients. An interesting twist to this situation is that if hired, the man would have been working in the company’s office in New Orleans, and would have primarily interacted with customers from Louisiana. The recruiter, who worked out of a Texas office, was born and raised in the Midwest.

An employer in New York called to list a job opening with a university in Texas. He wanted a student who was majoring in marketing, and he was willing to pay the

successful candidate an excellent salary, as well as all travel/relocation costs. There was just one more qualification – the candidate must have a Texas accent. It seems he had a number of Texas customers, and this employee would be calling them regularly on the telephone. He believed that Texans are more likely to buy from other Texans, so he considered the accent an absolute qualifier. The university personnel were baffled. Could this be a legal “qualification?” The man seemed to have a legitimate business reason for wanting it, yet something just did not seem right about it. Upon investigation, they could find no legal reason to deny the man’s request. Accent discrimination, they concluded, is not prohibited under the law, unless it is associated with “national” origin. Regions within the U.S. are not considered indicators of “national origin” and are therefore not protected. Because of their discomfort with the situation, they chose not to list the requirement anyway, but were concerned about what they would do if a student who did not have a Texas accent but who was otherwise qualified for the position were to have requested a referral. They were saved from having to solve the dilemma when no students were interested in the job.

Studies have investigated accent discrimination as proliferated through various forms of media. Lippi-Green (1997) reported that in movies (specifically Disney movies), characters that have foreign accents are frequently the villains or have distinctly negative attributes. In television and movies, regional accents are often associated with characters that have less desirable traits, such as ignorance, stupidity, or untrustworthiness. One example familiar to most readers is Eliza Doolittle in “My Fair Lady,” a movie based on the novel by George Bernard Shaw, Pygmalion. In order to succeed, she had to rid herself

of her native Cockney accent. Viewers witnessed her struggle to learn to speak “proper” English, and cheered as she eventually triumphed over her heritage, learning to speak a more acceptable form of her language. As she acquired her new pronunciation style, she was granted acceptance and respect, leaving no doubt that her accent had been a barrier to achieving those prizes. The movie is an effective messenger for accent reduction companies.

Recently, an article appeared in an issue of Texas Monthly magazine that illustrates how subtly negative attitudes toward particular accents infiltrate our minds. The article was about a man who was suspected of killing several young women but who has never been charged with the murders because of a lack of evidence. The man was an aerospace engineer who retired from an illustrious career at NASA. In the article, a co-worker and friend of his observed that “When you met him, he came across as this country boy, a rancher’s son with a thick accent, ... but the fact was that he was one of the brightest people down there.” (Hollandsworth, 1999, p. 148)

While some accents seem to be regarded as negative, others are considered to be an asset. In a recent issue of National Geographic, an article appeared about Nebraska in which the author reported that “Omaha’s central time zone, neutral accents, and a diligent, modestly priced workforce made it a good bet for toll-free call centers and telemarketing operations” (Smith, 1998, p. 126). In an inset narrating a photograph, the author repeated the claim that “the locals’ mild midwestern accents” were an asset in luring telemarketing companies to the area.

Judgments concerning intellect and character that are based on accent, such as the ones recounted above, are devastating to their victims. Our accents are bound to us as securely as our cultural traditions and even our physical characteristics. Accents are important messengers of who we are, so rejection of a person's accent has the effect of rejection of the whole person. Lippi-Green (1997) points out that:

We use variation in language to construct ourselves as social beings, to signal who we are, and who we are not and cannot be...This process is a functional and necessary part of the way we communicate. It is not an optional feature of the spoken language. (p. 63)

Yet, those discriminatory judgments are unfortunately quite common.

Accent discrimination can be found everywhere in our daily lives. In fact, such behavior is so commonly accepted, so widely perceived as appropriate, that it must be seen as the last back door to discrimination. And the door stands wide open. (Lippi-Green, 1997, p. 73)

A logical first step toward eliminating discrimination is identifying it and making its existence known to those who may practice it without awareness. Studies such as this one will help us to do just that. The project worked from the following hypotheses, developed to test the suspicion that regional accents influence judgments made by those who interview candidates for jobs and that those judgments affect their hiring decisions:

Hypotheses

Hypothesis 1. A.) Individuals prefer particular U.S. regional accents; and B.) that preference influences hiring decisions when interviewing U.S. English speakers.

Hypothesis 2. Preferences toward regional accents are influenced by the listener's perception that regional accents are indicative of personality traits that are desirable in employment candidates

Hypothesis 3. Discrimination against regional accents is influenced by the listener's perception that regional accents are indicative of character traits that are undesirable in employment candidates.

Hypothesis 4. Individuals do not accurately identify all regional accents.

Hypothesis 5. A speaker with a highly recognizable regional accent is more likely to be assigned less desirable character traits than is a speaker with a less recognizable regional accent. (The easier it is to recognize a person's accent, the more likely it is that the association is negative.)

Review of Literature

The research base for these hypotheses comes from over thirty years of investigations by linguists and social psychologists on subjective reactions to speech, *i.e.*, “on the processes involved when listeners evaluate speakers (Lambert, Hodgson, Gardner, & Sillenbaum, 1960; Carranza & Ryan, 1975; Rickford, 1985), on social stereotyping based on language (Lambert, 1967; Giles & Ryan, 1982), on the psychological processes involved in speech accommodation (Giles, 1971; Giles & Coupland, 1991), on the cognitive processes that structure collaboration in discourse (Clark & Wilkes-Gibbs, 1986), and on language-focused discrimination (Labov, 1969; Giles, 1971; Shuy, 1973; Kalin & Rayko, 1978; Milroy & Milroy, 1985; Rickford & Traugott, 1985; Lippi-Green, 1994,).

Matsuda (1991) has investigated the issue of accent discrimination from a legal perspective, specifically “the application of anti-discrimination law to accent-bias” (Matsuda, 1991, p. 1330). She provides a detailed evaluation of several key legal cases that involve accent discrimination in the workplace and evaluates these cases in light of the Title VII legislation of the Civil Rights Act that prohibits discrimination based on a person’s race, color, religion, sex, or national origin. The plaintiffs in Matsuda’s study had accents that identified them as speakers of English as a second language, or foreign-accented speakers. Accent, according to the law, falls under the category of national origin; however, according to Matsuda, no case involving accent discrimination in the

workplace has been decided in favor of the plaintiff, even though Title VII prohibits employers from refusing to hire qualified applicants because customers or clients do not like the applicant's accent (Matsuda, 1991, p. 1376).

Lippi-Green (1997) discusses accent discrimination in terms of language-trait focused discrimination, which she feels is a by-product of a "standard language ideology," that has evolved from a "mythical beast called Standard US English." Briefly, a standard language ideology is defined as "a bias toward an abstracted, idealized, homogeneous spoken language which is imposed and maintained by dominant bloc institutions and which names as its model the written language, but which is drawn primarily from the spoken language of the upper middle class" (Lippi-Green, 1997, p. 64). "The most salient feature is the goal of suppression of variation of all kinds" (Lippi-Green, 1994, p. 166).

The standard language ideology involves all aspects of spoken English, not just the phonological similarities within a geographic or ethnic group that constitute an accent. In addition to accent, grammaticality, usage, lexical expressions, and other aspects of dialect are included in the ideology of a Standard English. Studies by Atkins (1993), Hollandsworth, Kazelskis, Stevens, and Dressel (1979), and Ugbah and Evuleocha (1992) have investigated the influence of those dialectical characteristics in the employment interview.

Some studies have been published that investigated the direct correlation between accent and employability. Shuy (1973), and Kalin and Rayko (1978) each investigated

particular speech characteristics in relation to respondents' willingness to hire the speakers for particular types of employment.

Shuy (1973) recorded segments of speech from 16 adult males from a variety of socio-economic-status groups in Washington D.C. Respondents in the study were persons with responsibilities for hiring at employing organizations in that city. Although the respondents denied using speech as a factor in their hiring decisions, the results indicated otherwise. A variety of socio-economic-status characteristics were assigned to the speakers by the respondents and correlated to the employability judgments made in regard to each speaker. The primary focus of the study was socio-economic-status as conveyed through speech and the implications of that status in employment decisions.

Kalin and Rayko (1978) conducted a study in Canada as a part of a larger investigation concerning multiculturalism and ethnic attitudes in that country. They recorded 10 Canadian male postgraduate students, five of whom were born in Canada and had English as their first language and five of whom spoke English as a second language. Respondents were undergraduate college students who were given brief biographical dossiers of the speakers and heard a 30-second recording of each one. The respondents were asked to make evaluative judgments about the speakers. English Canadians were rated more favorably in qualities such as efficiency, honesty, and the ability to get along with others. In addition, the English Canadians were rated as more suitable for higher-status jobs, indicating discrimination against foreign-accented speakers, even though the dossiers on the speakers showed similar backgrounds, experience, and qualifications.

Ethnicity, socio-economic-status, and foreign accents have been investigated with regard to employment discrimination. The subject of this study is regional accents, which are distinguishable by their phonological features, in order to investigate the effect of native US regional accents without ethnic or socio-economic characteristics in hiring decisions.

Preston (1993) investigated the perceptions of regional dialectology by having respondents place particular dialects onto a map of the United States. He discovered that blank maps of the US were not as effective as maps that have the states identified for the respondents. Without the states being delineated, geographic confusion interfered with the goal of the study. Because one of the goals of this project was to determine whether listeners could correctly identify regional accents, some of the information from his report was used in developing the mapping structure of this project. Carver (1989) devoted an entire book to the process of categorizing and describing regional accents in the United States, and his discoveries have proved quite helpful in the analysis of the data collected in this project. Responses and biographical information respondents were analyzed using the specific geographic information reported as well as the broader, more generalized regional dialect areas described by Carver (1989) of Southern and Northern.

Preston (1989) asserted that judgments about personality characteristics are often formed on perceptions of a dialect region, and that those forming the judgments may have no consistent way of identifying the particular geographic region in question. In other words, reactions to a particular accent may be measurable, but there is no way to know if all the respondents thought the accent was representative of the same geographic area. In

Preston (1998) the perceptions of regional speech were investigated by having respondents assign characteristics to various regions by using their own stereotypical notions rather than having them respond to actual speech samples. He asked a group of students at a university in Michigan to indicate on a map where they thought different varieties of English exist, then to assign labels to describe those variations. His results showed a definite tendency to associate particular stigmatized attributes to the various geographic regions. For instance, while the students' own local area was labeled as having "good" English, other regions, most notably the South, was labeled as a place where "bad" English is spoken.

Labov (1991) reported that a particular listener's own linguistic security (or insecurity) can greatly influence the judgments he/she makes regarding another speaker with the same accent as well as the judgments of speakers of other accents. Concerning a study he had conducted in New York City in 1966, he reports that "those who used the highest percentage of a stigmatized form in casual speech were the most sensitive in stigmatizing it in the speech of others." (p. 176)

A review of the literature reveals a great deal of research concerning the overall and specific influence of accents with respect to the judgments we make about each other. This study attempts to add yet another measure of those judgments and the way they affect decisions we make and those critical decisions made about us during the most basic process of getting a job, the interview.

Method

The notion of a standard language ideology with regard to the pronunciation of words spoken in English and the correlation between subjective reactions to speech and hiring practices is the focus of this study. Through a pilot study, respondents revealed a preference for speech that has the fewest regional, ethnic, and foreign-accented characteristics, which appeared to have an effect on the respondents' acceptance of certain speakers for particular types of employment.

Pilot Study

The pilot study for this project had results similar to Kalin and Rayko (1978). Respondents listened to recordings of twelve speakers of English reading a passage about baseball. The speakers, all male, were a mixture of native English speakers from various regions in the US, one from London, England, and speakers of English as a second language who spoke English with a foreign accent. Respondents rated the characteristics of the subjects' speech, personality traits of each speaker, and determined for which positions on a university campus each subject might be considered suitable.

Subjects with speech that was perceived as most "accent-free" were ranked more positively on personality traits and were viewed as more suitable for high-prestige "public" jobs than those whose speech was marked with regional or ethnic features as well as those speakers who were perceived as sounding more rural. These preliminary findings suggested that there might be an employment bias against certain regional and

ethnic varieties of speech. That result that led to the more detailed project that is the subject of this report.

Design and Development of Project

The execution of the project involved seven phases: (1) the development of a reading passage, (2) the collection of speech samples (3) the development of the test instrument, (4) Computer programming for delivery of test instrument and data analysis, (5) testing the instrument (6) data collection, and (7) analysis and results.

Selection of Reading Passage

During an employment interview, successful candidates commonly avoid extremely vernacular and very informal speech, as indicated by the findings in Ugbah and Evuleocha (1992), where euphemisms and transitions were found to have a negative influence in the decisions of recruiters as a component of a measured variable called “style.” Employment interviews most frequently consist of conversational exchanges in which applicants are being judged on a number of factors, some of which the interviewer may not even be aware, as indicated in the studies by Kennedy (1985) and Shuy (1973). Sustained formal speech is most often reserved for public speaking or monologues that do not involve conversational exchange. Therefore, it is appropriate to categorize the speech pattern of successful candidates in employment interviews as a relaxed form of formal speech.

Labov (1972) discussed the variation of styles of speech in relation to the context of the speaking situation. He labeled the type of speech that occurs during a formal interview process “careful speech.” The interview situation that was the subject of his

discussion was one that takes place when an investigator attempts to collect a speech sample during an interview with a subject. He was not considering the interview for employment, which is the subject of this project. Yet, the same conditions might be said to apply in both types of interviews. The distinction Labov was making had to do with the amount of attention the subject was paying to his own speech during the interview. Certainly, an interview for employment would elicit the same level, if not a higher level, of attention to one's speech that an interview with a linguistic investigator might. A simulated interview situation rather than a reading passage would have gathered the "careful" speech samples that would most closely resemble those of the employment interview. However, it was desirable to avoid as many differences between the speakers as possible. If the subject speaker samples had involved free speech, it would not have been possible for the effect of "what" they said rather than their accents to have been measured, resulting in one more uncontrolled variable in the study. Therefore, I made the choice to use a reading passage, forfeiting the advantages of the "careful speech" style for the advantage of the controlled variable. As nearly as possible, the only linguistic differences between the subjects were their regional accents.

In order to duplicate the careful speech pattern as closely as possible, the reading passage was developed to be as informal as possible. It was written in the first person, and described a lazy Saturday morning in which the speaker lounged over breakfast at a local café. The reading passage was developed to include a balance of U.S. regional accent markers.

The passage took about 45 seconds to read. Longer passages with more regional markers were tried, but were discarded in favor of this one when the project was put together and it was discovered how long it would take the respondents to complete the survey. Reducing the passage to this short version reduced the time to complete the survey by several minutes. This consideration was necessary because of the nature of the conditions of collecting the data and the respondents themselves. The respondents were at work during a busy time of their work year. Much of the hiring of college graduates occurs during the spring months, which coincides with the time when the data were collected. The timing was by design, in that it was easier to gain access to a large number of hiring professionals who were from a wide geographic variety as they traveled to the University of North Texas for recruiting purposes, but the amount of time respondents could reasonably be expected to spend on the survey was about 30 minutes. The reading passage that was finally accepted and used in this study is presented in Figure 1.

Figure 1. Reading Passage

<p style="text-align: center;">Saturday Morning</p> <p>Every Saturday morning, I enjoy a nice long breakfast at a small restaurant that is right around the corner from my house. I start with a hot cup of coffee while I read the local newspaper. By the time I get through the crossword puzzle, I am starting to “wake up” and discover that I am hungry. So, I have another cup of coffee while I decide what to eat. I think about what I ought to have – something healthy like fruit and wheat toast – but then I order scrambled eggs, hash browns, and pancakes – with more coffee, of course. By now, the other “regulars” have come in and are sitting nearby. At least one of us usually has a new joke to tell, which almost always leads to another joke or some good-natured tale. Then, it’s time to get up, pay the check, and get on with the rest of the day – starting with a nice long nap.</p>
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Selection of Subjects

Subject speakers are native U.S. speakers of English whose accents are representative of a geographical region. None have particular distinguishing voice characteristics or speech impediments. The subjects are all white males with no particularly distinguishing vocal characteristics that indicate age. The study was designed for the investigation of geographic regional accents, and any ethnicity or gender difference in the subjects would have added other variables. As nearly as possible, the only difference in the voices heard by the respondents was the speakers' regional accents.

Each subject represented a geographic region in a broad sense, so an attempt was made to select speakers who had accents common to a large population within a given region, rather than accents that are marked and associated with a smaller group within the region. In other words, the speaker from Louisiana did not have the accent commonly identified as "Cajun" within Louisiana itself. To verify that each speaker was a good representative of a particular geographic region, at least two natives of each represented region were asked to listen to the recordings and identify which, if any, of the speakers sounded like he was from that region. In each case, the native listeners identified the correct speaker as being representative of the region. While not flawless, this process did lend some credibility to the authenticity of the regional speech samples that were included in the study.

The primary target of the study was to discover attitudes that influence hiring decisions for professional level positions. Many professional positions require candidates

to have post-secondary education; therefore, all ten speakers had earned at least a bachelor's degree from an American university. Seven of the subject speakers had earned doctoral degrees. This information becomes more meaningful when we look at how the respondents judged the subjects' education levels based on hearing them read a short passage.

Collecting the Samples

Each subject took several minutes to familiarize himself with the passage. He was instructed to read the passage in his most comfortable and most natural style. His reading was captured on a Sony digital tape recorder. If the subject stumbled or read any word or phrase awkwardly, he read the passage again. Most subjects required more than one reading, but none required more than four. In some cases, the second and third reading produced more marked regionally accented speech, presumably because the passage was becoming more familiar to the speaker and thus induced a more natural and relaxed reading. When this occurred, the most regionally marked speech sample was selected.

Design of Survey Instrument

The respondent first saw an introductory screen and heard a woman's voice giving a brief introduction and instructions. A woman's voice was used for the narration and instructions throughout the session, because all of the speaker subjects were males and I did not want to inadvertently give the listeners any base of comparison to the narrator. In other words, because this voice might have been perceived as the "professional" media voice, it was feared that a male voice might unconsciously be used as a base against

which the subject speakers might be compared. The female voice was that of a professionally trained radio announcer who volunteered her services for the project.

On the computer screen, the respondents saw a graphic design that looked like the front of an old-fashioned radio with dials and 10 numbered buttons. (See Figure 2.) The narrator told them to select a numbered button and then listen to the speaker, who would be reading a short passage. The respondents were then told that there would be a series of questions following each speaker, but that the questions dealt with the impressions made by the speaker and were not related to the content of the passage. The narrator told them that the success of the project depended upon their honest reactions and were asked not to give careful consideration to any question, but rather to react quickly. They were instructed to select any number to begin.

Figure 2. Graphic on screen during introduction and instructions.



Random Speaker Selection

In order to prevent any significance to the order in which the samples appeared, two levels of randomness of speaker order were designed into the instrument. First, as mentioned above, the respondents selected the numbered buttons on the screen in any order they chose. In addition, the speakers were randomly assigned to a numbered button on the screen by the computer. The order was reset at random for each respondent. In other words, one respondent would hear a certain speaker when button “1” was selected; another respondent would hear a different speaker when the same button was selected.

The two levels of random selection insured that the speakers appeared to the respondents in a completely random manner. Therefore, even if a respondent began to anticipate the questions for the later speakers and began to form answers during the reading itself, any effect this anticipation might have had is spread randomly to all speakers and therefore has no significance. Likewise, the first time the respondents heard the reading passage, it was feared that they might not be able to separate the speaker from the content of what was being read. It was expected that by the time the passage was repeated several times, the respondent would pay more attention to the speaker himself and less attention to the passage being read. Thus, the random speaker order would also minimize the effect of the reading passage content by spreading it randomly throughout all of the subject speakers.

Executing the Survey

The respondents moved the cursor to a numbered button and “selected” it. Immediately, the speaker subject’s voice began. At the conclusion of the passage, the respondent was asked the questions about the speaker. Each question was presented in the form of a scale that gave respondents multiple options between two extremes. The scale was designed in a circular shape, to avoid any correlation between the descriptors on the scale and positive or negative association that might have occurred on a linear scale. (See Figure 3.) The descriptors for the extreme ends of the scale began and ended at different places around the circle for each question. The left side or the upper half of the circle represented different values of positive and negative responses for each question. As the respondent rolled the cursor over an area on the scale, the words describing the answer appeared. When the respondent clicked on the “Continue” button, the next question appeared. Before the “Continue” button was selected, the respondents could change their answers; but respondents could not back up to change any answer after selecting the “Continue” button. After the last question regarding each speaker was answered, the original screen with the radio face and 10 numbered buttons appeared. The buttons that had not yet been selected were bold; those that had been selected were dimmed. The respondent proceeded to select each number in any order until all ten had been selected.

Figure 3. Graphic on screen during questions.



Judging the Speaker

The questions were designed to collect reactions to accents that involved judgments that listeners made about speakers' backgrounds, personalities, and employability. The possible answers appeared on scales that ranged from one extreme to the other. The first question asked for an overall impression of the speaker on a scale from "extremely positive" to "extremely negative." The next 12 questions asked for judgments concerning the speaker's personality and background. Inserted into these personality questions was one concerning the listener's judgment about the speaker's probable competency in a job, but no specific job was mentioned at this point. A complete script of the survey is included in Appendix A, showing the questions, possible responses, and the points assigned to each answer for data analysis.

Identifying the Speaker

Next, the listener was asked to identify the speaker's native U.S. region. For this question, a map of the U.S. showing the 50 states divided into geographic regions appeared on the screen. As the respondent moved the cursor over the map, the regions became highlighted. When one was selected, the respondent was given the opportunity to be more specific by identifying a particular state within the chosen region. For New York, Texas, Illinois, and Massachusetts, even further specificity was invited. Regions and/or cities appeared highlighted as the cursor rolled over these states. In any case, unless a specific city (New York City, Boston, or Chicago) was selected, the respondent was asked whether the speaker sounded "urban" or "rural." If a specific city was selected, then it was assumed the speaker sounded "urban" and that question did not appear. At each level, the respondent was given the option of selecting "No, I cannot be more specific." If this response was given, the next main question appeared, skipping over those questions related to further specificity.

Geographic regions were used, rather than linguistic regions associated with dialectology studies, in order to avoid respondents selecting a stereotypical dialect region. The geographic regions divided the states in such a way that the Southern, Northern, and Midwestern states were not grouped together. The respondent could not simply identify a speaker as "Southern," "Northern," or "Midwestern." If dialectology map regions had been used, it was feared that respondents might select the region based on their own perceptions what a stereotypical "Northerner" or "Southerner" might sound like without giving each particular speaker thoughtful consideration. In other words, while listening to

Speaker 6 (who was from Georgia), the respondent could not simply decide that the speaker was “Southern.” Instead, the respondent knew that he/she would be asked to place the speaker on a map that divided the southern states into several regions. Therefore, the respondent was required to listen with more discernment in order to determine the origin of the speaker more precisely.

Selecting the Jobs for the Speaker

Finally, the listeners were asked to identify the types of jobs for which they thought the speaker would be most suited. The types of jobs appeared in four broad categories that differed in two primary factors: 1) the level of verbal communication the employee would have to perform and whether that verbal communication would be external (to clients) or internal within the organization, and 2) on the technical skill level required by the job. “None” was also a choice. The respondents were invited to select all of the categories they wished. As they selected them, the categories became highlighted. Clicking on them again “unselected” them. If they selected “none,” the other categories were automatically “unselected.” The respondents could change their answers until they were satisfied and clicked on the “continue” button. The last question asked whether or not the speaker would “fit in” at the respondent’s own employing organization.

About the Respondent

After all 10 speakers, the respondents were asked to answer one last set of questions that provided information about themselves. The first question asked how he/she would describe the culture/environment of his/her current employer. This question was important because the respondent had just been asked whether each speaker would fit into

the respondent's company. It was necessary to know what the respondent considered that environment to be in order to assign any significance to the question about the speaker.

Biographical Information

The next questions were biographical, asking for year of birth, gender, and where he or she spent the majority of his/her pre-teen years. The choices for that question were: U.S., Other, and Moved Frequently, Can't Claim One Region. If the respondent selected the U.S., a map of the U.S. appeared on the screen and the respondent was asked to select a geographic region. The map and the regions were identical to the ones the respondents had just completed for the subject speakers. The same levels of specificity were invited as the process proceeded identically to the previous map questions. This began a series of "levels" of specificity that was also used during the questions about the speakers. At each level, as the cursor rolled over the map, geographic regions were highlighted. When one was selected, the respondent was asked if he/she could be more specific.

If the respondent indicated that he/she had spent the majority of his or her pre-teen years in "Other," meaning outside the U.S., then a map of the world appeared, and the respondent was led through a similar process of identifying specifically where in the world those years were spent. The difference was that once a particular continent was selected, then an alphabetical listing of countries appeared, and the respondent was able to scroll down the list and select a country.

Identifying the Respondent's Accent

The next questions asked the respondents to identify their own regional accents, by asking them to select the region on the map where people speak most like themselves.

Again, they were given options to be increasingly specific. As before, they could select a specific state or indicate that they could not be more specific. If they selected Texas, they could further select one of five regions within the state: north, west, central, east, and southeast. At these points, they were asked if their own speech is urban or rural. If they selected Massachusetts, Illinois, or New York, they could further select the cities of Boston, Chicago, or New York City. In those cases, the urban value was automatically assigned to the database.

Linguistic Security

The next questions concerned the respondents' attitude toward their own regional accents, in an attempt to establish levels of linguistic security. Respondents were first asked to describe their accents on a scale from "None at All" to "Very Strong." The next question asked them to judge their accents on a scale from "Very Nice" to "Very Bad." They were then asked if they had ever received attention for their accents and, if yes, whether that attention had been mostly negative or mostly positive. The next question asked if they had ever tried to change their accents. If they had tried to change their accent, they were then asked to what extent they had been successful in that attempt. All respondents were then asked if they would change their accents if they could do so easily and without cost. If they answered yes, the map reappeared and they were asked which region they would elect to sound like. This question concluded the questionnaire.

Respondents were thanked for their participation and the computer screen rolled the "credits" naming those who had contributed to the preparation of the instrument and those who had provided substantial support for the project.

Testing the Instrument

Seven people tested the instrument. The survey was administered to each person independently of the others and each was asked to complete a questionnaire about it. The questionnaire requested information about the points of confusion, lack of understanding, the time it took to complete it, and any features of the instrument the testers particularly disliked. The testers reported times of 23-35 minutes to complete the survey. Based on other feedback, several changes were made to the instrument, and one change was made to the collection process. The original Question J asked the respondent to rate the speaker on a scale of friendly to hostile. One of the testers pointed out that the word “hostile” has been used frequently in the past few years in association with violent acts, as reported by the news media, so he was reluctant to label a speaker as “hostile.” The point was well taken and the word “hostile” was changed to “unfriendly.” Another tester suggested that having a set of written instructions in addition to the vocal instructions from the narrator would be helpful in getting respondents oriented to the instrument. An instruction sheet was added, and is included as Appendix B. Two typographical errors in the graphics of the instrument were noted and changed. The other comments from the testers were all positive.

Data Collection

Selection of Respondents

Potential respondents were asked to participate in a research project that was investigating verbal skills in relation to the hiring process. All were assured that their responses would not be individually identified. The study attempted to capture

respondents' most honest responses without causing any fear that they were being "set-up" or trapped into disclosing discriminatory tendencies.

Respondents represented a wide range of employers. All were in positions that involved interviewing candidates for employment. Professional human resource personnel, recruiters, and line managers were all included as respondents. The only requirement for respondents was to have some responsibility in the hiring process that involves interviewing candidates, either in person or over the telephone. National college recruiters from Fortune-1000 companies, as well as owners of small and mid-size corporations were included. Most of the respondents work for medium-to-large corporations from a variety of industries, which included, among others: high-technology, entertainment, health-care, environmental sciences, industrial equipment, insurance, law enforcement, agriculture, snack-foods, banking, railroads, and government agencies.

Data Collectors

Ten people assisted in the collection of the data. Each person had a compact disk that contained the collection instrument, multiple copies of written instructions for the respondents, a floppy disk for data collection, and a log sheet. The log sheets were useful, because they ensured that each set of data would have a unique identifier and would therefore be entered into the database without fear of duplication or overwriting another set of data. Each respondent was assigned two identifying numbers. The first set was a three-digit code called the Area Identification (RArea). Each collector was assigned a different Area Identification code. In other words, each of the ten collectors had his/her own Area Identification code that he/she used for every set of data he/she

collected. For example, one collector's name was Doug. Every set of data Doug collected began with the Area Identification code "222." Another collector was Gary. Every set of data Gary collected began with the Area Identification code "444."

Each respondent was then assigned a two or three-digit code that was assigned by the collector (RID). So each respondent was identified by two numbers: the RArea and the RID, thus ensuring unique identifiers.

An advantage of having ten different people assisting with the data collection was that a more random sample was gathered. Collecting the data involved a great amount of interaction with the respondents, and to some extent, some familiarity with the respondents. Respondents were selected because of their responsibilities for hiring others, and that selection was made based on the knowledge of the data collectors. For the most part, respondents were disposed to participate for two reasons: 1) a brief description of the research piqued their interest; and 2) they had rapport with the collector and were willing to participate because of the collector's request. If I had collected all the data myself, then each respondent would likely have had some rapport with me. In that case, a bias would have been inherent in the sample, because all of the respondents would have had something in common, a professional relationship with me. As it was, I did not know the respondents, nor did I select them. The collectors selected them based on the criteria given to them (people who hire other people).

Equipment and Conditions

The instrument was contained on a compact disk and was designed to be used on either IBM-compatible personal computers. The responses were recorded on 3 ½" floppy

disks, in comma-delimited text format. Respondents had to have access to a computer in order to participate. The computer had to have a compact disk player, a 3 ½” disk drive, a mouse, and the ability to produce reasonably high-quality sounds. Either external speakers or earphones were used. When external speakers were used, the respondent had to be in a secluded office or very quiet environment. Earphones allowed somewhat more flexibility, in that the environment did not have to be quite as secluded or quiet; however, it was still important that the respondent be in an area where he/she would not be distracted.

Conducting the Survey

In most cases, the collectors took a compact disk containing the project, 3 ½” floppy disks, earphones, and copies of written instructions to corporate locations, which allowed the respondents used their own offices and computer equipment to perform the survey. In some cases, the respondents were on the university campus in order to recruit and hire students, so the survey was administered in an office in the Center for Cooperative Education at the University of North Texas. Respondents were not interrupted during their responses, but the investigator was close by in case the respondents had questions about the equipment, the instrument, or how to enter their answers. No information was given to the respondents about the speakers they were about to hear. Questions about the study itself were politely avoided or sidestepped until after the respondents had completed the survey.

The data were collected in a computer file for each respondent, then transferred to an Access database. Each file was transferred from the floppy disk to the data base in two

steps: 1) the biographical data were entered first, in order to establish the RArea and RID as a valid and unique identifier for the respondent; 2) then the responses to the speakers were loaded into a separate file but were connected with a one-to-many relationship in the data base. Throughout the study and in this report, when the prefix “Bio” appears before any label, the data it describes was extracted from the Biographical Responses database file. Data from the Responses to Speakers database file are usually preceded with a “q.”

Analysis of Data

The data were examined and sorted in the database, and then exported to Excel spreadsheet files for analysis. The data were analyzed statistically, using analysis tools in Excel to determine significant findings. The biographical information and the responses to the speakers were joined into one Excel spreadsheet for certain analytical procedures.

For each series of data, the means and standard deviations were calculated. For comparisons between two sets of data, t Tests were performed. For comparisons across all sets of data comparing responses to all speakers, Analysis of Variance (ANOVA) analyses were performed. For comparisons of the effect of the various characteristics on the probability of a speaker being selected for particular types of jobs, simple and multiple regression analyses were performed. To discover a relationship between the correct recognition of a speaker's accent and the judgments made about the speaker, a correlation test was applied. Pivot tables were created to organize, count, and calculate various sets of information. In all statistical tests and tables, the raw data were used for the input values. An alpha level of .05 was used for all statistical tests.

Preparing the Data for Analysis

The responses were divided into four categories that required different kinds of analyses: 1) those that had an assigned value of 1-7 already coded into the data; 2) those that had nominal information about the respondent; 3) those that had nominal information

about regional identification of the speakers; and 4) those that had a logical value of “true” or “false.”

When respondents answered questions that required a judgment of the speaker’s personality, background, or a specific characteristic, the answers spanned a range between two opposing values, e.g., friendly-unfriendly. Depending on the answer selected, a score ranging from 1 for the most negative answer (Extremely Unfriendly) to 7 for the most positive answer (Quite Friendly) was automatically recorded by the computer into the respondent’s answer file. For all such questions, the value of “4” was assigned to the neutral “I can’t determine” response. Those answers placed on the positive side of the continuum received a score of 4, 5, or 6; those on the negative side got a 3, 2, or 1. In all cases, a higher score was an indication of a more positive response. Even the neutral “4” was considered to be more positive than a definite negative response receiving a 1, 2, or 3.

Nominal information about the respondents was sorted and grouped for description and discussion, but was not converted to numeric scoring for statistical comparisons. Information about the gender and age of the respondents fall into this category, as does the information about the respondents’ background and whether or not they would elect to change their own accents.

When a respondent selected regions on the map, the nominal abbreviation for the region was recorded into the database. The nine regions, the abbreviations, and the states included in them are shown in Table 1.

Table 1: Geographic Regions for Identifying Speakers

New England Region (NER)	Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island
Mid Atlantic Region (MAR)	New York, Pennsylvania, New Jersey
North East Central Region (NECR)	Michigan, Wisconsin, Ohio, Indiana, Illinois
North West Central Region (NWCR)	North Dakota, South Dakota, Minnesota, Nebraska, Iowa, Kansas, Missouri
South Atlantic Region (SAR)	Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida
South East Central Region (SECR)	Kentucky, Tennessee, Alabama, Mississippi
South West Central Region (SWCR)	Texas, Louisiana, Oklahoma, Arkansas
Mountain Region (MR)	Montana, Idaho, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico
Pacific Region (PR)	Alaska, Hawaii, Washington, Oregon, California

When a state was selected, the full name of the state was recorded in the database. These nominal data to identify the speakers' regions were converted to a scale of 0-3. If the respondent correctly identified the speaker's state, a score of "3" was assigned. If the region, but not the state, was identified, a score of "2" was assigned. If the respondent placed the speaker in a region that was in the same general area as the correct region (i.e., the speaker was from Alabama, which was the SECR, and the respondent placed him in

the SAR), then a score of “1” was assigned. If the respondent did not place the speaker in the correct area of the country, a score of “0” was assigned.

For each respondent, the scores received for each speaker were added and divided by 30, the total number of possible points each respondent could have received for exactly identifying each speaker’s region and state, giving a percentage score for the respondent’s ability to identify the accent. In this way, scores for correctness reflect a respondent’s ability to identify a regional accent exactly or even somewhat accurately.

When respondents chose some states, they had the opportunity to be more specific and select a particular city or, in the case of Texas, a region of the state. However, because this level of specificity was not available for all states, that information was not used for these analyses.

The respondent also described the speaker as “rural,” or “urban.” These answers were recorded as numbers in the data base with “1” representing “rural,” “2” representing “urban,” and “3” representing “I can’t determine.” Although they were numbers, they were actually nominal data and were not used in the statistical analyses.

The logical value answers were converted to the numbers of “1” for “true” and “0” for false. The questions identifying which job categories were judged as appropriate for each speaker made up this category of data.

Analysis of Respondents

Gender and Age of Respondents

A total of 56 respondents participated in the study, of which 35 were males and 21 were females. The respondents ranged in age from 22 to 61. The majority (41) of the

respondents were between 30 and 60 years old: 15 were in their thirties, 12 were in their forties, and 14 were in their fifties. Ten respondents were in their twenties, and 5 were between 60 and 62. The average age of the males was 46, while the average age of the females was 40.

Native Regions of Respondents

Half of the respondents (28) were natives of the Southwest Central Region of the United States. Four were from other Southern regions. Fourteen of the respondents were natives of Northern US regions, and four were from the Mountain or Pacific regions. Six of the respondents were either not born in the US or said that they had moved too frequently during their pre-teen years to claim one region.

Analysis of Response Data

The first and primary hypothesis of the study asserts that individuals prefer particular regional accents and that such preferences influence hiring decisions. The second and third hypotheses claim that those preferences are influenced by the listener's perception that regional accents are indicative of character traits that are commonly considered desirable in employment candidates, and that the reverse is also true -- negative character traits assigned based on regional accents result in discrimination against speakers with those accents. Two different types of questions in the survey instrument collected the data to investigate these hypotheses. Fourteen questions gathered judgments about specific characteristics and overall impressions of the speakers with answers scored from 1-7. These questions appear in Table 5. One other question generated five different fields of data concerning the types of jobs the respondent thought

best suited the speaker. Each set of data was analyzed independently, then compared to each other. To test the hypotheses, several statistical analyses were performed. An alpha level of .05 was used for all statistical tests.

Data Sorted by Speaker

The first set of data consisted of the 14 questions that asked for a value judgment about specific characteristics and overall impressions of the speaker. The responses to those questions had values of 1 (most negative) to 7 (most positive), with 4 being the neutral answer. The responses to these questions for all 56 respondents were sorted by Speaker ID so that the responses for each speaker could be examined independently.

The database used the numbers 1-10 to identify the speakers. When possible, the Speaker ID number was converted to a label that used a more descriptive identifier for the speaker, which was the state or city his accent represented.

For each speaker, the mean for each respondent's answers was calculated, along with the standard deviation for each. The mean for all respondents' answers for each of the questions was also calculated, along with the standard deviations. Finally, overall means for all scores to all questions for each speaker were calculated. The overall computed means (with standard deviations in parentheses) ranged from a low of 3.65 (0.53) for Speaker 1 (New Jersey) to a high of 5.14 (0.44) for Speaker 3 (California). With the exception of Speaker 1, all means were above the mid-point of 4.0. Seven of the speakers received overall means ranging from 4.22 (0.68) to 4.99 (0.38). Other than

Speaker 3 from California, only Speaker 10 (Minnesota) also had a mean score over 5.

Table 2 lists the computed overall average scores for each speaker, along with the standard deviation for each.

Table 2: Computed Overall Average Scores of Speakers (Scale 1-7), Means, Standard Deviation (SD), from lowest to highest average.

Speaker ID	Speaker Descriptor	Overall Computed Average	SD
1	New Jersey	3.65	0.53
6	Georgia	4.22	0.68
8	Louisiana	4.54	0.67
7	Chicago	4.76	0.37
5	Alabama	4.79	0.55
2	North Carolina	4.87	0.46
4	Texas	4.99	0.38
9	Boston	4.83	0.31
10	Minnesota	5.07	0.33
3	California	5.14	0.44
Overall	All Speakers	4.69	0.13

The averages for all speakers from all respondents were submitted for ANOVA to discover if the differences between the averages were statistically significant. The results revealed that the variations between groups (speakers) were significant, $F(9, 550) =$

17.59, $p = 1.01 \times 10^{-25}$. The F -value for the .05 significance level was 1.89, so the null hypothesis was rejected, indicating that there is a strong difference between the responses for each speaker.

Data Considered by Job Categories

To determine part B of the first hypothesis (“these accent preferences influence hiring decisions”) was substantiated, regression analyses were performed. During the survey, the respondents selected which categories of jobs they thought were most suitable for each of the speakers. There were five possible answers that described four categories of jobs: 1) None, 2) Positions involving a high level of public or customer contact (referred to briefly hereafter as “high contact”, 3) Positions involving a high level of technical expertise, but little public or customer contact (“high-tech”), 4) Positions involving extensive internal communications (“internal”), and 5) Positions involving little technical expertise and little public or customer contact (“low-tech/low-contact” or “low-tech”). Respondents could select as many categories as they wished for each speaker. For each answer, a logical value of “true” (meaning the choice was selected) or “false” (meaning the choice was not selected) was entered. If they selected “None,” a logical value of “true” was recorded for q01, and “false” was entered for q2-q5.

The logical values were converted to “0” for “false” and “1” for “true” answers for the four job categories. The number of acceptable positions was then calculated for each speaker as assigned by each respondent and overall. Table 3 shows the number of times speakers were selected for each type of job and those numbers converted to percentages.

Table 3: Jobs Acceptable for Each Speaker- All Respondents

Job Totals		q02 (High Contact) Totals	q03 (Hi Tech) Totals	q04 (Internal) Totals	q05 (Lo Tech/Lo Contact) Totals
Speaker 1	New Jersey	3	13	6	36
Speaker 2	North Carolina	23	12	22	12
Speaker 3	California	29	20	21	5
Speaker 4	Texas	29	15	14	10
Speaker 5	Alabama	18	20	18	13
Speaker 6	Georgia	14	7	11	30
Speaker 7	Chicago	18	24	16	9
Speaker 8	Louisiana	18	10	10	24
Speaker 9	Boston	21	21	16	10
Speaker 10	Minnesota	20	23	15	7
Percentages of Respondents who Accepted Each Speaker for Each Job Category					
		q02 (High Contact) Totals	q03 (Hi Tech) Totals	q04 (Internal) Totals	q05 (Lo Tech/Lo Contact) Totals
Speaker 1	New Jersey	5.36%	23.21%	10.71%	64.29%
Speaker 2	North Carolina	41.07%	21.43%	39.29%	21.43%
Speaker 3	California	51.79%	35.71%	37.50%	8.93%
Speaker 4	Texas	51.79%	26.79%	25.00%	17.86%
Speaker 5	Alabama	32.14%	35.71%	32.14%	23.21%
Speaker 6	Georgia	25.00%	12.50%	19.64%	53.57%
Speaker 7	Chicago	32.14%	42.86%	28.57%	16.07%
Speaker 8	Louisiana	32.14%	17.86%	17.86%	42.86%
Speaker 9	Boston	37.50%	37.50%	28.57%	17.86%
Speaker 10	Minnesota	35.71%	41.07%	26.79%	12.50%

Simple regressions were performed for each of the job categories and for the totals of all jobs selected, using speaker averages (computed averages of all scores assigned by each respondent) and the totals of the job categories selected as acceptable for each speaker. The results were significant, $F(1, 559) = 23.48$, $p = 1.64 \times 10^{-06}$. The null

hypothesis was therefore rejected. The scores assigned to the speakers had a significant relationship to the number of times speakers selected them for any job category.

Regression analyses were also performed on each specific category of jobs against the average scores. Especially noteworthy was the regression of the “high-contact” positions, $F(1, 559) = 175.16, p = 5.71 \times 10^{-35}$. The null hypothesis was rejected. The overall ratings assigned by the respondents did indeed have a very strong relationship to the speaker being selected for this particular type of job, which involves high levels of public and customer interaction. The higher the average score, the more likely the speaker was to be chosen for this type of job.

The next category of jobs, those referred to as “high-tech,” when regressed against the computed averages for the speakers, produced results that were significant, but substantially less so than the previous category, $F(1, 559) = 8.69, p = 0.003$, well above the critical 1.89. Although it is statistically significant, it is somewhat less apparent that a high average score in the survey would be likely to result in selection for one of these jobs.

Jobs involving internal communication within a company also have a strong result when regressed against the overall averages, $F(1, 559) = 42.22, p = 1.81 \times 10^{-10}$. These results are statistically significant, and we may infer a relationship between these factors; however, the meaningfulness of the results really begins to emerge when we look at the later regressions involving specific characteristics in these hiring decisions.

In the results of regressing the fourth category of jobs (low-tech/low-contact) against the averages of the speakers, there was a significance, but it was a negative one, $F(1, 559) = 323.86$, $p = 1.94 \times 10^{-57}$. In this case, the coefficients for the averages were negative. So, the higher the average score, the less likely the speaker was selected for this type of job.

Next, the data were explored to discover which, if any, of the characteristics measured in the responses had any significance in accepting some speakers for certain job types while rejecting other speakers for the same type of job, as well as the decision to accept a particular speaker for certain types of jobs and reject the same speaker for other types of jobs. Multiple regression analysis was performed on each of the categories of jobs with all of the 560 responses for each of the 14 questions involving personal characteristics of the speaker. Each type of job revealed meaningful preferences for different characteristics. (See Table 4).

The first category, the high-contact positions, was most interesting, $F = 14.63$, $p = 4.73 \times 10^{-30}$, indicating a strong result from the test. The t-statistics of the characteristics of “charming” and “friendly” as well as the judgment about whether or not the speaker would “fit in” were the only ones that had any statistical significance. Those did show strong significance, at levels of 3.3, 2.5, and 3.8, respectively, with a t-critical value of 1.89 at the .05 significance level. All results are presented in Table 4.

The second job category, the high-tech jobs, produced $F = 4.27$, $p = 3.34 \times 10^{-07}$. Although it is a significant finding, it is not as strong as the previous test. In addition, the

individual characteristics were not especially significant. “Competence” and “intelligence” were, along with “fit-in,” somewhat more significant than the other characteristics, but did not produce strong results. The t-statistic for “competent” was the strongest, and it was only at 2.33, but it was above the critical 1.89. “Charming” also received a significant statistic result, but it was a negative one of -2.17 , as was “assertive” at -1.91 . “Intelligence” and “fit-in” were slightly more significant than the rest, but the scores were below 1.89 at 1.75 and 1.72, respectively. (See Table 4.)

The multiple regression analysis of the next category, the one involving jobs requiring extensive internal communications within a company, also produced significant results, $F = 5.39$, $p = 1.05 \times 10^{-09}$, although it also revealed that only one characteristic seemed to have any strong influence: whether or not the speaker would “fit-in.” That t-statistic was considerably stronger than the others at 3.2, and was well above the critical 1.89. After “fit in,” “charming” (1.88) and “competent”(1.72) were much higher than any of the other characteristics, but were below the .05 significance level of 1.89. (See Table 4.)

The last category of jobs, those involving low-tech/low-contact, had somewhat stronger results, $F = 27.51$, $p = 1.7 \times 10^{-54}$. One t-statistic fell above the significance level (1.89) on the positive side, and that was “friendly” at 1.92. “Intelligence” had a strong negative result of -3.67 , and the t-statistic for “educated” was -2.35 . “Energetic” was also a significant -2.17 . No other characteristic approached the significance level of 1.89.

Table 4 lists the results for the characteristics by job category, with the significant positive results in black, significant negative results in red, and other results in blue.

Table 4: T-Statistics from Regression Analyses to Determine Which Characteristics Influenced Selection for Each Job Category.

	High Contact Jobs	High-Tech Jobs	Internal Jobs	Low-Tech Low Contact Jobs
Overall Impression	<-0.11>	<-1.11>	<-0.04>	0.23
Educated	<0.64>	<-0.48>	<-1.68>	<-2.35>
Intelligent	0.10	1.76	1.16	<-3.67>
Energetic	0.85	0.44	0.31	<-2.16>
Laid Back	0.43	<-1.58>	<-0.58>	0.06
Outgoing	0.39	1.42	<-0.18>	<-1.00>
Assertive	1.17	<-1.91>	<-1.40>	<-0.12>
Refined	2.52	<-1.11>	1.68	<-1.52>
Charming	3.33	<-2.17>	1.88	<-1.49>
Friendly	<-0.28>	<1.79>	<-1.34>	1.92
Competent	<-1.22>	2.33	1.72	<-0.30>
Cultured	0.19	1.35	0.01	<-0.25>
Advantaged	0.70	0.65	<-1.69>	<-1.62>
Fit In	3.89	1.73	3.26	<-1.03>

Note: Characteristics with significant negative direction results (at alpha .05) are <red>; significant positive direction results are black, other results are blue.

Data Considered by Questions

The data for each question (characteristic) were examined individually. All responses were averaged, producing a mean and standard deviation for each question. The means for the questions (with standard deviations in parentheses) ranged from 4.14 (0.76) for “Cultured” to 5.19 (0.57) for “Competent.” As would be expected, the average of the

means for all questions was the same as the average of the means for all respondents, 4.69 (0.45).

When the respondents answered each question, they actually placed their responses along a continuum between two opposing values. For purposes of discussion and ease of tabulating data into charts and tables, each question is referred to by the positive value. During the survey, respondents saw the responses in a circular shape, with the positive and negative values appearing randomly on different parts of the circle. This design was intended to minimize any tendency a respondent might have to stay in one part of a linear continuum without consciously deciding to do so. The respondents could not anticipate where the answers were going to appear and had to look for the wording that best described their answers. Nevertheless, the values are presented here in a consistent fashion, with the positive ones on the left.

Table 5: Questions Asking for Judgments of Characteristics of Speakers: Lead-In's,
Description of Response Scales, Means, Standard Deviation (SD).

	Question Lead-In	Scale Descriptors	Mean	SD
qA	My overall impression of the speaker	Positive-Negative	4.80	0.55
qB	Speaker seems to be	Educated-Uneducated	4.83	0.61
qC	Speaker seems to be	Intelligent-Not Bright	4.97	0.59
qD	Speaker seems to be	Energetic-Lazy	4.34	0.54
qE	Speaker seems to be	Laid Back-Up Tight	4.82	0.46
qF	Speaker seems to be	Outgoing-Withdrawn	4.72	0.38
qG	Speaker seems to be	Assertive-Docile	4.20	0.47
qH	Speaker sounds	Refined-Rough	4.35	0.77
qI	Speaker sounds	Charming-Irritating	4.62	0.60
qJ	Speaker sounds	Friendly-Unfriendly	5.12	0.48
qK	On the job, expect speaker to be	Competent-Incompetent	5.19	0.57
qL	Sounds like from background that is	Cultured-Earthy	4.14	0.76
qM	...a background that is economically	Advantaged-Disadvantaged	4.60	0.60
qP	At my company, speaker would	Fit In- Not Fit In	4.89	0.68

The questions used in this instrument were somewhat similar to those used in other language attitude studies, but they were different enough to warrant an investigation into each question and the effect it had on the overall outcome of the study. Therefore,

each question was alternately taken out of the overall computed average and a t-Test: Paired Sample for Means was performed on each of the two sets of averages, one set of averages with the question included and the other set of averages without the question included. The results were consistent, with almost all of the returned t-statistics above the significance level of 1.96 for two-tailed tests at .05 alpha. Ten of the questions had t-statistics that were greater than 3.2 (in some direction) and less than 17 (in some direction). Two of the questions had t-statistics that were less than the significant 1.96: qF (Outgoing) was -0.84 , and qI (Charming) was 1.74 . For these two questions, the null hypothesis was not rejected. The two sets of averages in each case were statistically the same. Two of the questions returned t-statistics that were very close to the significance level: qE (Laid Back) at 2.0 , and qM (Economically Advantaged) at 2.42 . Although these two could be considered significantly different statistically, it is possible that the differences are not meaningful.

The first question (qA) asked the respondents to rate their overall impression of the speaker. Then, the questions delved into specific characteristics about the speaker. It would be reasonable to assume that the overall impression of the speaker should be quite similar to the overall averages of the various characteristics. In other words, if the respondent's overall impression of the speaker was "somewhat positive," it would follow that the conglomerate average of the scores assigned for the individual characteristics such as "intelligent", "friendly", and "competent" would also be "somewhat positive." A t-Test: Two-Sample Assuming Equal Variance and another t-Test: Paired Sample for Means were performed on the two variables. The t statistic for both tests was well below

the significance indicator. As it turned out, there was no significant difference between the scores. So the null hypothesis was not rejected, and the scores were, as expected, statistically the same.

Data Analyzed by Questions and Speakers

The responses to each of the questions were examined for significant differences between speakers, using Anova Single Factor analysis at the .05 probability.

Consistently, the F statistics were much higher than the F -value of 1.89, at .05 alpha. The F -statistics ranged from 9.44 for the characteristic of “energetic” to 17.04 for the characteristic of “educated.” In all cases, the probability for error was reported as a small number with an exponential of 10 to a negative power ranging from 13 to 25. In other words, there was almost no chance that the results were by accident. In all cases, the null hypothesis was rejected.

Speaker Accent Recognition

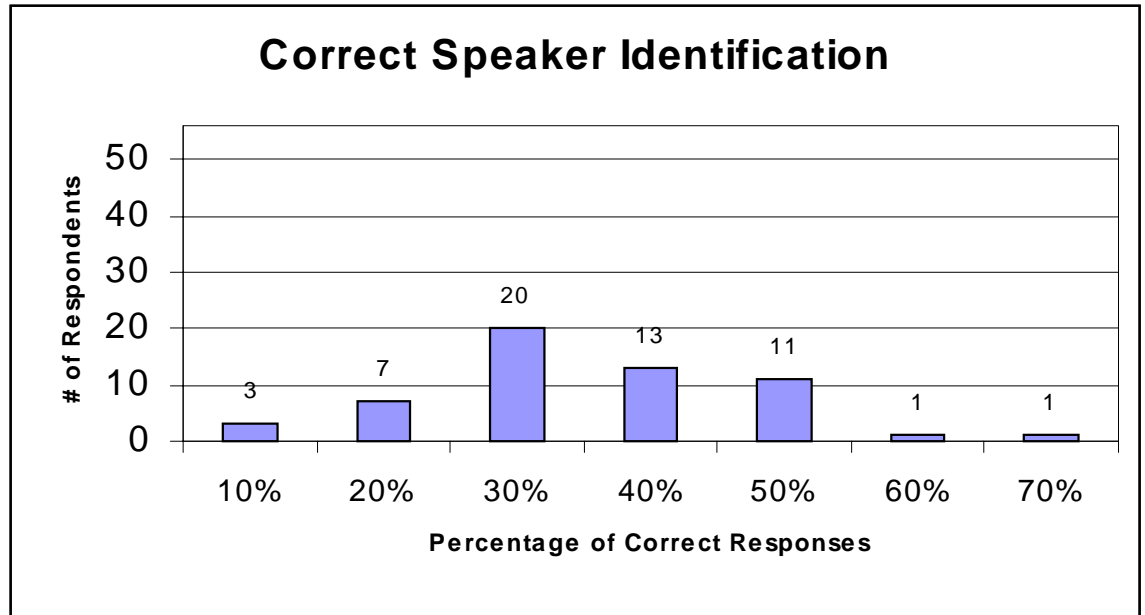
The last two hypotheses dealt with the correct identification of regional accents. The first of them predicts that listeners do not correctly identify regional accents. The second suggests that when listeners do correctly identify regional accents, they are more likely to assign negative characteristics to the speaker.

To determine the accuracy of a respondent’s identification of a speaker’s accent, the respondent’s accuracy scores were accumulated and averaged for each speaker. Each respondent could have received as many as three accuracy points for each speaker, and as few as zero, with a total of as high as 30 possible for all ten speakers. The respondents total points were tallied and divided by 30 to determine the percentage of correctness

achieved by that respondent. The percentages of correctness by the respondents were sorted into intervals of 10%. The results were that 43 of the respondents identified speakers with less than 50% accuracy. Thirty of the respondents also fell below 30% recognition accuracy. The highest level was 77%, which was achieved by one respondent and then there was a large gap as the next highest respondent was 60%. More than half (54%) of the respondents recognized speakers with less than 40% accuracy. The chart below depicts the number of respondents who fell within each range of accuracy.

These accuracy levels are even more meaningful when we consider that if a respondent had identified all ten speakers with only vague recognition of the general part of the country this speaker represented, the respondent's score would have been 10 (one point for each speaker) and his rate of recognition would have been at 33%. By the same token, respondents who recognized all 10 speakers' regions correctly but did not identify the state would have received a score of 67%. The chart below (Figure 4) depicts that most respondents fell somewhere between being able to identify the general area of the country and the specific region (but not state) of the speaker.

Figure 4. Correct Speaker Identification



Specific Speaker Identification

To discover if some regional accents are more identifiable than others, the average recognition correctness was calculated for each speaker. The points were tallied for each speaker by each respondent and divided by 56 (total number of respondents) to determine the percentage of correct identification of the speaker, with weightings in the scores to account for some respondents having identified the speaker exactly. Using these scores, the most correctly identified speaker was #1 (New Jersey), with 59%. North Carolina (#2) was correctly recognized at 54%. The least recognition percentage was 22% for the speaker from California (#3). The other speakers fell in between, as depicted in Table 6.

Table 6: Recognition Score for Each Speaker Converted to Percentage

Speaker #	#1 New Jersey	#2 North Carolina	#8 Louisiana	#9 Boston	#4 Texas
Total Score	99	91	83	75	70
% Correct	58.93%	54.17%	49.40%	44.64%	41.67%
Speaker #	#6 Georgia	#5 Alabama	#10 Minnesota	#7 Chicago	#3 California
Total Score	60	54	48	43	37
% Correct	35.71%	32.14%	28.57%	25.60%	22.02%

Speaker Recognition Frequency

Another way of examining whether or not a speaker was accurately identified is to look at the frequencies of recognition. The data were first tabulated to discover how many times a speaker was identified by any level of recognition. This produces higher percentages overall, because each time a respondent received any points, it counted as one frequency. There was no weighting for the level of correctness. Even so, there appeared to be some speakers that were rarely identified at all and others who were regularly identified, at least in regard to the correct area of the country, if not the specific region. The speaker from Louisiana was recognized at this level by 51 (91%) of the respondents. All but five of the respondents knew he was from the south. Likewise, the speakers from North Carolina (89%), and Georgia (88%), New Jersey (84%) were placed correctly in the general area of their actual regions by a vast majority of the respondents. The speakers from California (36%) and Chicago (38%) were still the least identified at any level by the respondents. Most of the respondents did not have any idea where these

speakers were from. Georgia (71%), Boston (68%), Minnesota (63%), and Texas (59%) fell in the middle, but still were recognized at some level of correctness by a majority of the respondents.

Incorrect Recognition

Of all the ways it is possible to examine the data about speaker recognition, the clearest information comes from the simplest approach of all: the number of people who did *not* recognize him *at all*. This is perhaps the most meaningful information, because it clearly demonstrates that even when the respondents had *some* level of recognition of *some* of the speakers, for other speakers the majority of the respondents had *no* level of recognition. Table 7 below shows the number and percentage of respondents who did not recognize the speaker's accent at all, not even well enough to place him in the correct general area of the country, a good indication that some accents are not easily identified.

Table 7: Incorrect Identification of Speakers

Speaker	Number of Incorrect Responses	Percentage of Respondents Answering Incorrectly
#3 California	36	64%
#7 Chicago	35	63%
#4 Texas	23	41%
#10 Minnesota	21	38%
#9 Boston	18	32%
#5 Alabama	16	29%
#1 New Jersey	9	16%
#6 Georgia	7	13%
#2 North Carolina	6	11%
#8 Louisiana	5	9%

Exact Recognition

Another informative way to display this data is by looking at the frequency of each speaker being exactly identified by the respondent. For this, only the scores of “3” were tabulated. In other words, these respondents correctly identified both the region and the specific state of the speaker. Actually, some of the respondents also correctly identified the city; but, because this level of specificity was not available for all speakers, in order to make meaningful comparisons only the region and state were considered here. Notice in Table 8 that the speakers from Texas and from Boston had the same number (14) of respondents recognize them, and that these two were the most often identified at

this level of accuracy. The lowest frequencies of exact recognition were shared by Chicago, Louisiana, and Alabama, with only 2 respondents identifying their correct states.

Table 8: Exact Identification of Speakers

Speaker	Number of Exactly Correct Responses	Percentage of Respondents Answering Exactly Correctly
#9 Boston	14	25%
#4 Texas	14	25%
#1 New Jersey	11	20%
#3 California	9	16%
#2 North Carolina	8	14%
#5 Alabama	3	5%
#10 Minnesota	3	5%
#6 Georgia	2	4%
#7 Chicago	2	4%
#8 Louisiana	2	4%

Correct Identification of Region

To complete the discussion about the frequency with which respondents identified speakers, one more set of information is required. It is presented in a different format. Table 9 below shows all of the numbers already discussed and adds the number of times a speaker was correctly identified at the regional level. These respondents selected the correct region, but either chose the wrong state or did not choose any state within the

region. All frequencies of scores of 0,1,2, and 3 are presented in Table 9 in order to compare where the greatest changes occurred between categories and speakers.

Table 9: Frequency of Recognition (at all levels) of Southern and Non-Southern Speakers
(ordered from least recognized to most recognized, using totals of all correct answers)

	Non Southern Speakers					Southern Speakers				
	#3	#7	#10	#9	#1	#4	#5	#6	#2	#8
Score	California	Chicago	Minnesota	Boston	New Jersey	Texas	Alabama	Georgia	North Carolina	Louisiana
0 (Incorrect)	36 (64%)	35 (63%)	21 (38%)	18 (33%)	9 (16%)	23 (41%)	16 (29%)	7 (13%)	6 (11%)	5 (9%)
3 (Correct State)	9 (16%)	2 (4%)	3 (5%)	14 (25%)	11 (20%)	14 (25%)	3 (5%)	2 (4%)	8 (14%)	2 (4%)
2 (Correct Region)	5 (9%)	12 (21%)	7 (13%)	9 (16%)	30 (54%)	9 (16%)	8 (14%)	7 (13%)	25 (45%)	28 (50%)
Total of Region & State Correct	14 (25%)	14 (25%)	10 (18%)	23 (41%)	41 (73%)	23 (41%)	11 (20%)	9 (16%)	33 (59%)	30 (54%)
1 (Correct General Area)	6 (11%)	7 (13%)	25 (45%)	15 (27%)	6 (11%)	10 (18%)	29 (52%)	40 (71%)	17 (30%)	21 (38%)
Total of all correct answers	20 (36%)	21 (38%)	35 (63%)	38 (68%)	47 (84%)	33 (59%)	40 (71%)	49 (88%)	50 (89%)	51 (91%)

Speaker Identification and Scores of Speakers

The last hypothesis asserted that a speaker with a highly recognizable regional accent is more likely to be assigned less desirable character traits than a speaker with a less recognizable regional accent. In other words, the easier it is to correctly identify a speaker's accent, the more likely the speaker will have been assigned lower scores in the 14 questions describing personality, background, intellectual, and competency traits. A Correlation test was applied to all of the scores assigned to the speakers and the level of recognition of the speaker as measured in the scoring system above. The result was a highly significant negative correlation of -0.58 and the null hypothesis was rejected. The more subjects recognized the speaker's accent correctly, the more likely the speaker was assigned overall lower average scores on the questions related to personality, background, intellect, and competence. The less recognized speakers were rated considerably more positively by these respondents. A comparison of the information presented in Tables 2-10 confirms that identification and scoring were indeed related with the hypothesized negative relationship.

Results

The statistical analyses of the data produced results that were consistently significant and supported the hypotheses; the meaning of the information gathered in this report must be carefully considered. Let us consider the hypotheses in relation to the analytical results to discover what they mean.

Hypothesis 1: A) Individuals prefer particular US regional accents; and B) those preferences influence hiring decisions when interviewing US English speakers.

For the first part of the first hypothesis, the results of the analyses are straightforward and did not reveal any major surprises. Respondents did react differently to the speakers and that difference is not only statistically significant, it is also meaningful. The different mean scores computed for each speaker based on the scores assigned for the 14 questions were not accidental. The speakers did elicit different responses from these participants, and it is reasonable to assume that similar differences would occur in any group of similar respondents. The variation of the voices of the speakers was not a completely controlled variable, but inasmuch as possible, the primary difference among them was their regional accents. The differences are somewhat more obvious when we look at the data for each speaker independently. Charts for all 10 speakers depicting the average score for each question appear in Figures 5-14 below.

Figure 5: Averages of responses for Speaker 1 (New Jersey).

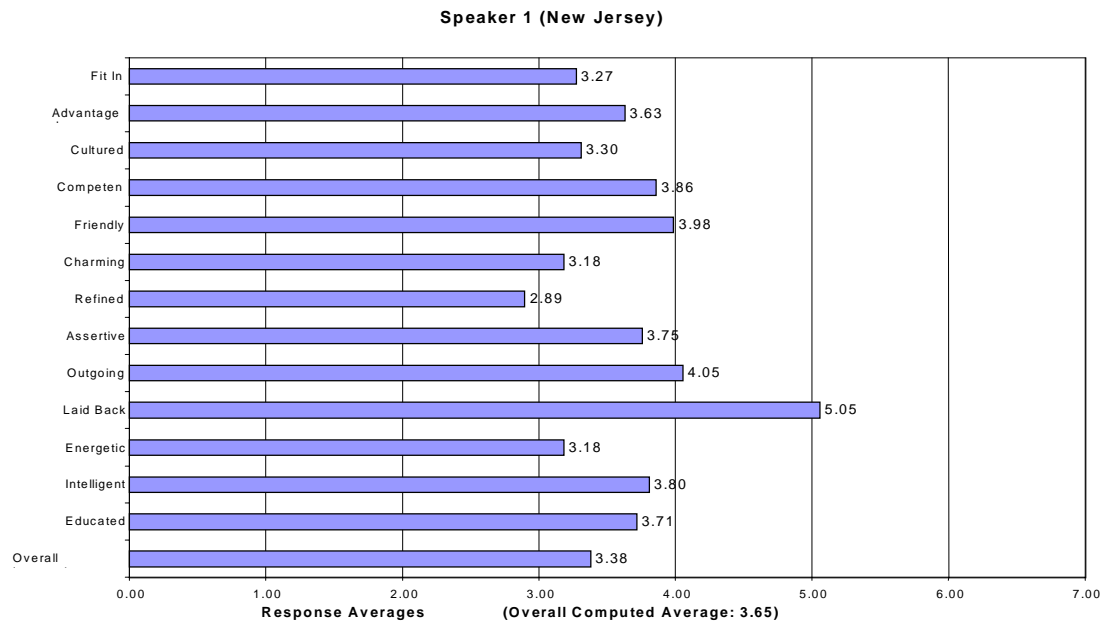


Figure 6: Averages of responses for Speaker 2 (North Carolina).

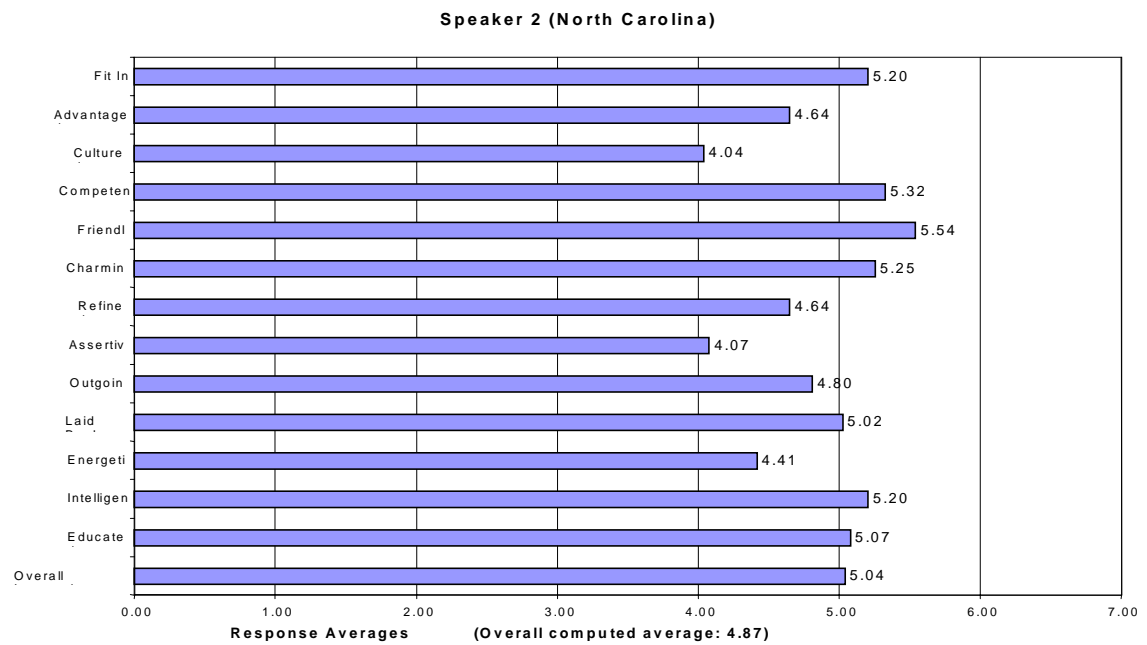


Figure 7: Averages of responses for Speaker 3 (California).

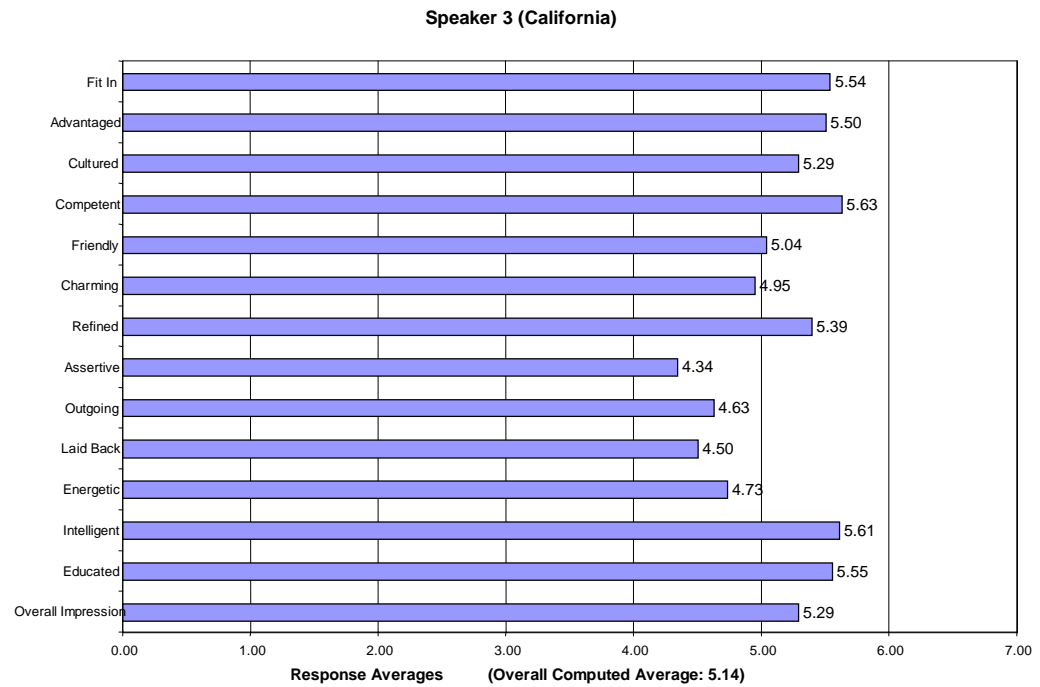


Figure 8: Averages of responses for Speaker 4 (Texas).

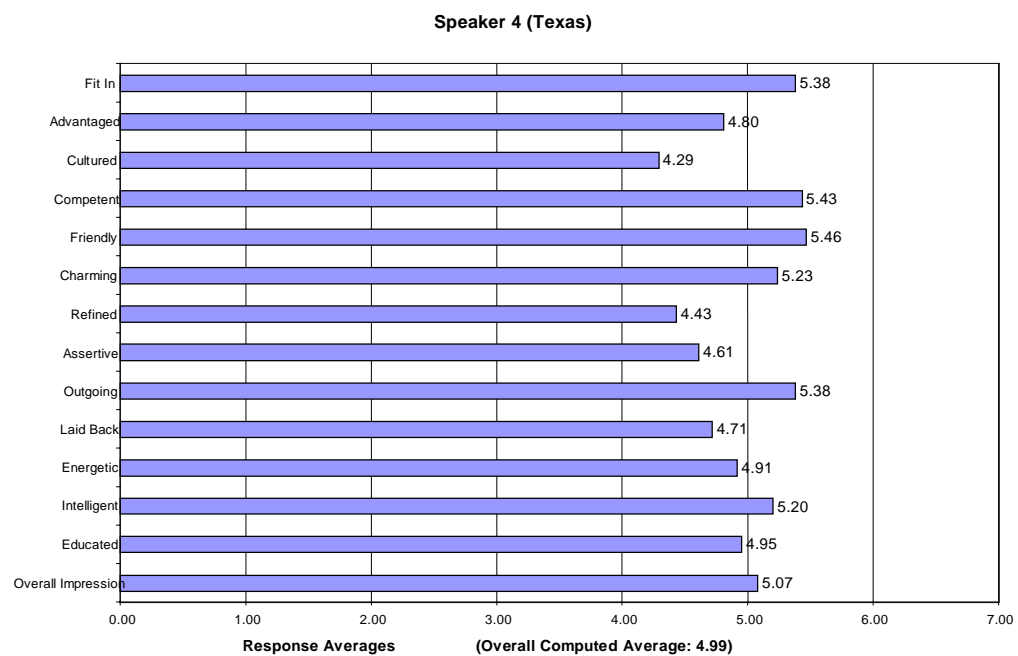


Figure 9: Averages of responses for Speaker 5 (Alabama).

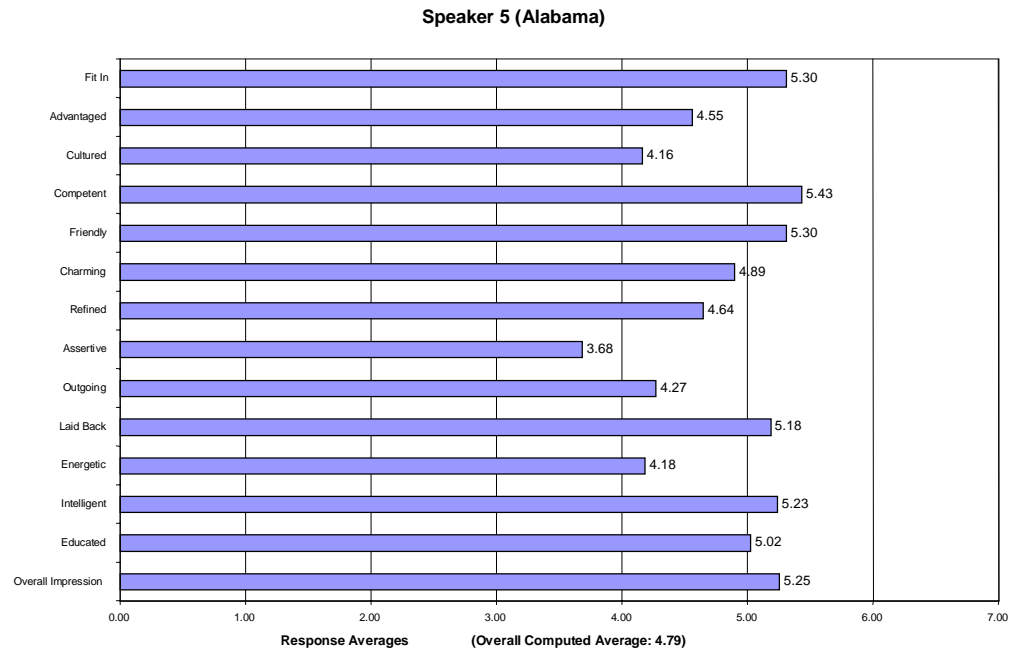


Figure 10: Averages of Responses for Speaker 6 (Georgia).

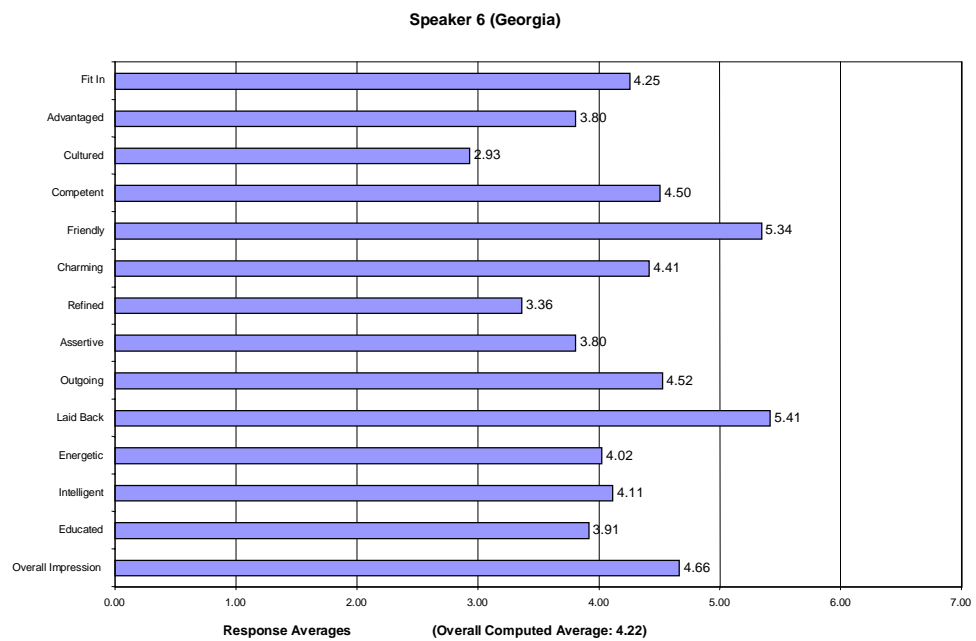


Figure 11: Averages of responses for Speaker 7 (Chicago).

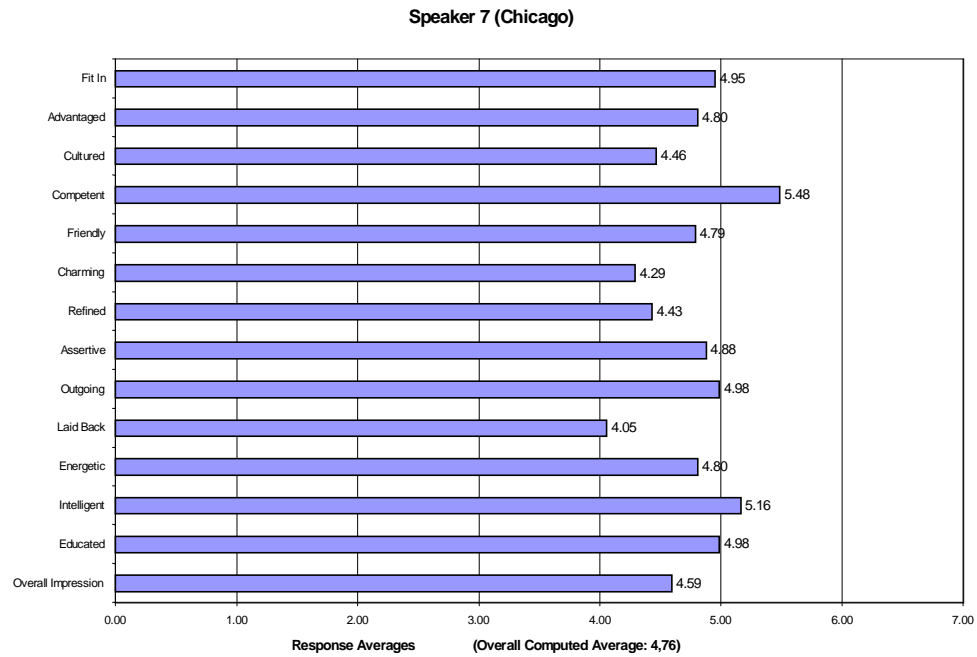


Figure 12: Averages of responses for Speaker 8 (Louisiana).

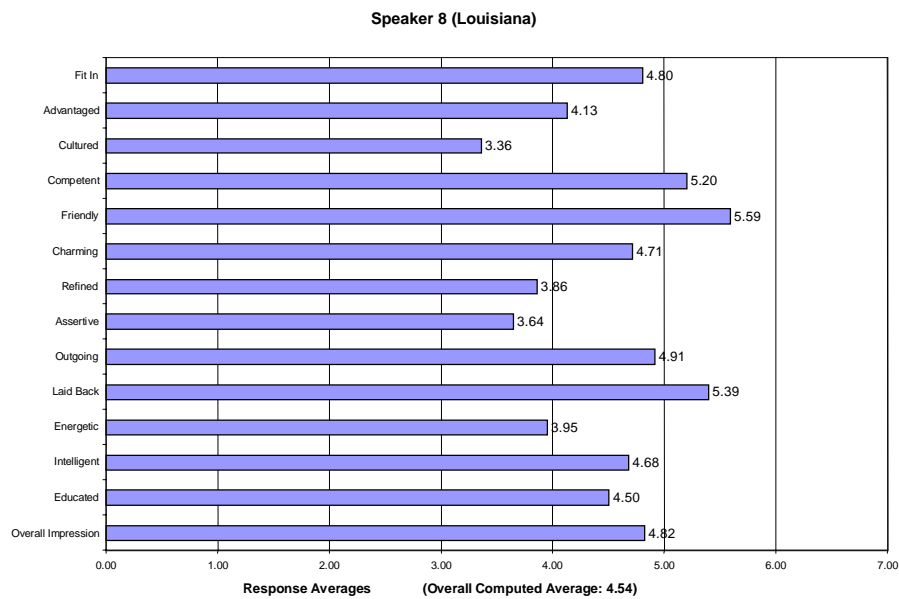


Figure 13: Response averages for Speaker 9 (Boston)

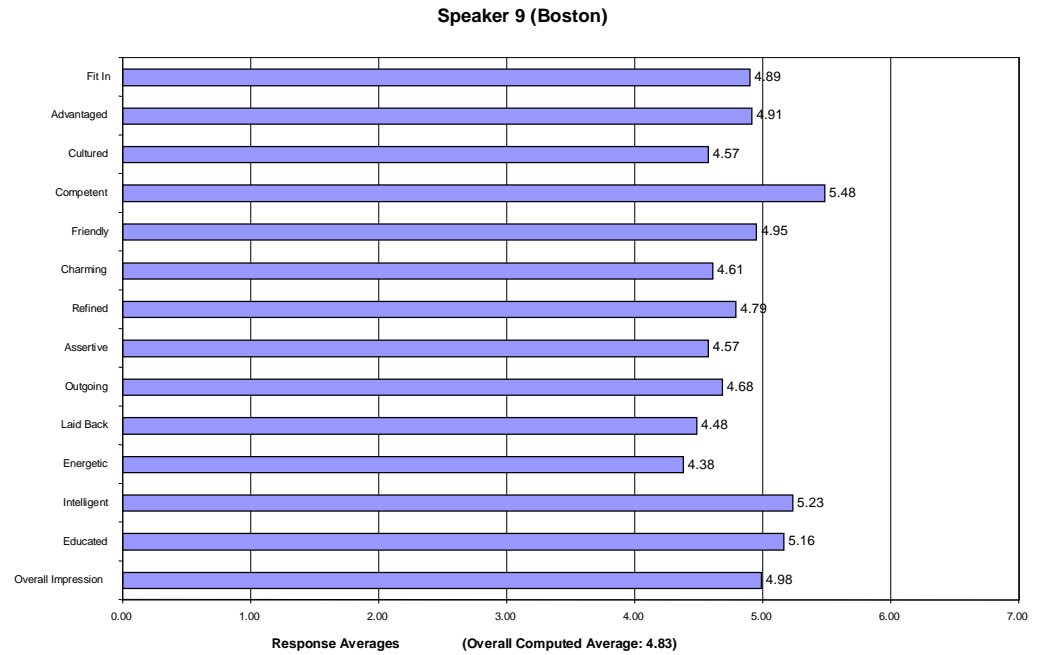
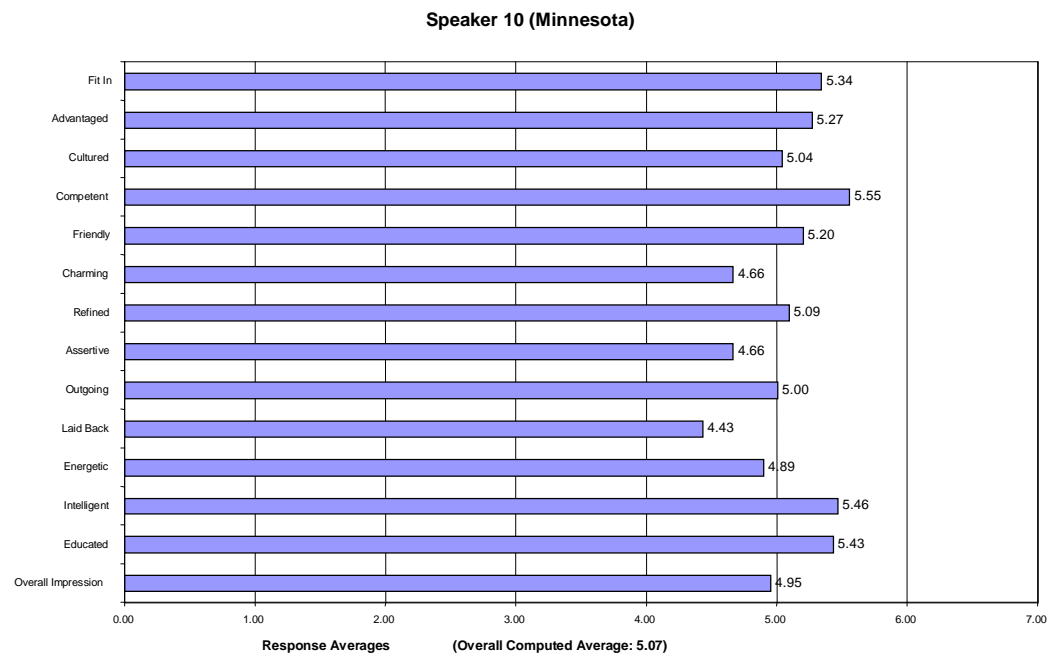


Figure 14: Response averages for Speaker 10 (Minnesota)



Considering the results concerning the second part of the first hypothesis, the results are equally strong. The statistical scores were well above the significant levels, and essentially rule out the possibility of the measured differences occurring by accident. Respondents definitely displayed a preference for certain speakers for those jobs that involve higher levels of public contact, and those were the same speakers they had rated highly in the questions about specific characteristics.

It is not so obvious that they used those characteristics or their opinions of the speaker in relation to those characteristics to select speakers for the high-tech and internal jobs, although there is evidence that some of the characteristics did figure into their decisions. For internal and high-tech positions, factors other than the characteristics measured in the questions might have been influential. Perhaps different questions might reveal a correlation that would reveal which factors matter most in selecting candidates for these types of jobs.

The characteristics measured in this study did seem to have a role in selecting speakers for the low-tech/low-contact positions, the least prestigious job category. For these jobs, respondents actually preferred speakers they had rated poorly in the individual characteristics. Basically, listeners do make judgments on various personality traits and other characteristics of a speaker. Those judgments also are reflected in the listener's assessment of which types of jobs are suitable for the speaker. People who hire other people make judgments based on a number of factors. Regional accent, it seems, is one of those factors. Hypothesis 1 (both part A and part B) is statistically supported.

Hypotheses 2 and 3 are inversely related, so all of the analyses performed for one were also relevant to the other; therefore, we will consider them together.

Hypothesis 2: Preferences toward regional accents are influenced by the listener's perception that regional accents are indicative of character traits that are desirable in employment candidates.

Hypothesis 3: Discrimination against regional accents is influenced by the listener's perception that regional accents are indicative of character traits that are undesirable in employment candidates.

The questions in the instrument designed to test these hypotheses are the 14 value judgment questions: qA through qM plus qP. The scale of each question ranged from 1-7, with 1 being the most negative answer, 7 being the most positive answer, and 4 being a neutral response. Therefore, when comparing scores, a higher one could be considered a more positive response. The charts in Figures 15-18 depict the average scores assigned to each speaker by all of the respondents for some of the questions.

The ratings for qC (Intelligent) and qB (Educated) were similar for each speaker and appear together in Figure 15, showing speakers #3 (California) and #10 (Minnesota) receiving the highest ratings, while #6 (Georgia), and #1 (New Jersey) received the lowest. Figure 16 depicts the averages of qF (Outgoing), with #4 (Texas) receiving considerably higher ratings than the others, although #10 (Minnesota) and #3 (California) also were rated highly. Speakers #1 (New Jersey) and #5 (Alabama) received the lowest ratings. In Figure 17, qA (Overall Impression) is depicted, along with the individual scores, depicting a similar trend in ratings to the computed overall averages as shown in

Table 2. Figure 18 combines the characteristics in qM (Advantaged), qL (Cultured), and qH (Refined), showing that those characteristics were not rated the same for many of the speakers. Respondents appeared to make a distinction among those characteristics, although the general trend of the averages was similar for several speakers.

Figure 15. Averages of all responses for qC (Intelligent) and qB (Educated).

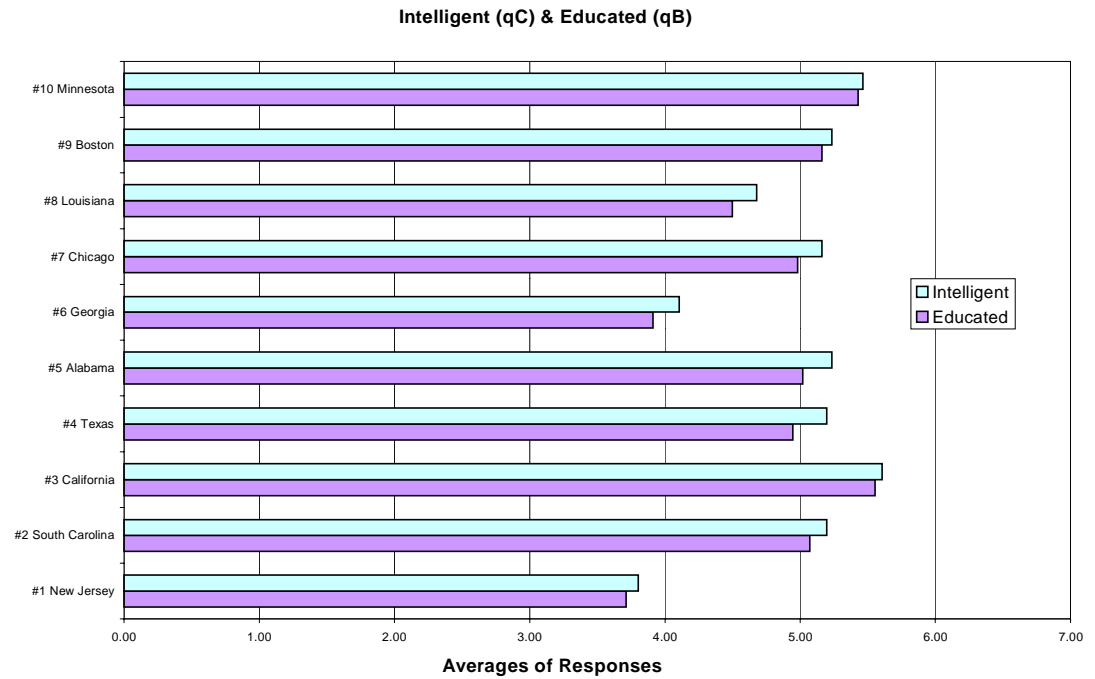


Figure 16. Averages of all responses to qF (Outgoing-Withdrawn).

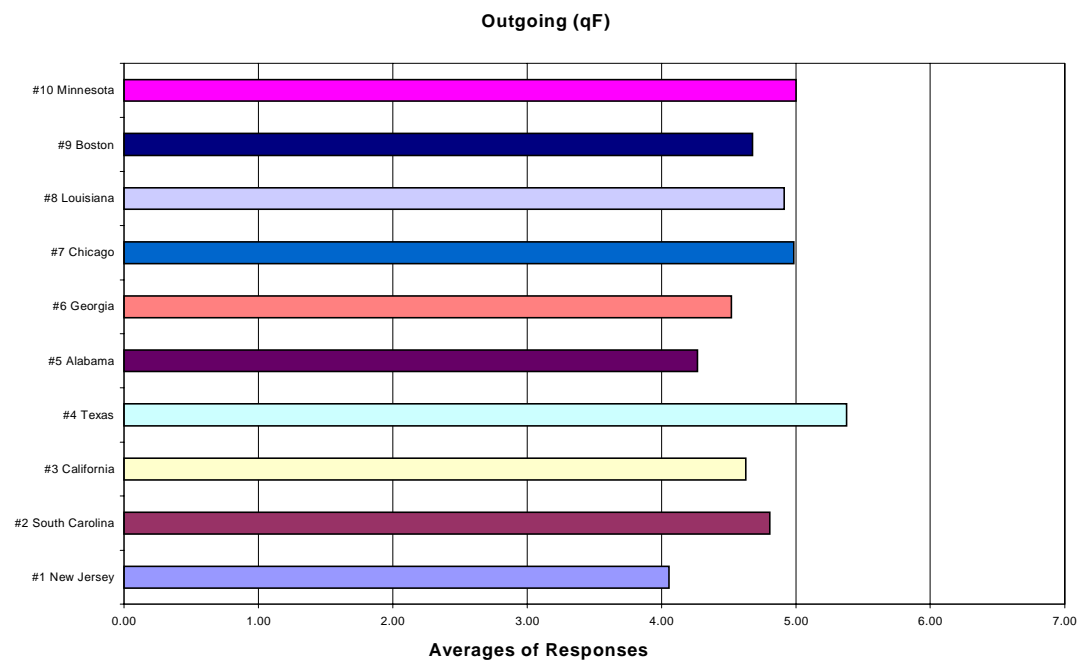


Figure 17. Averages of all responses to qA (Overall Impression)

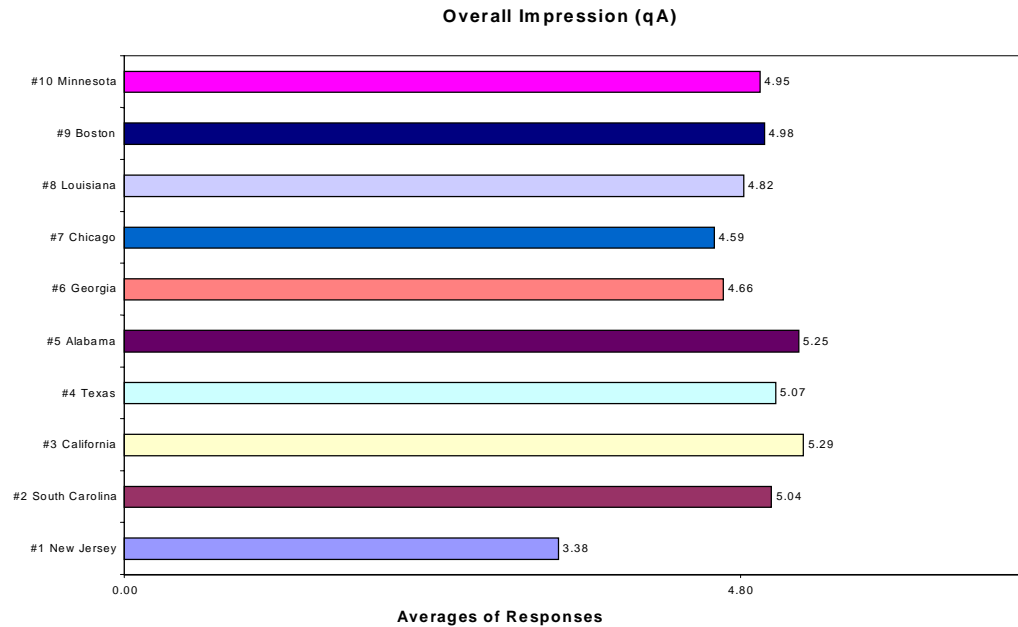
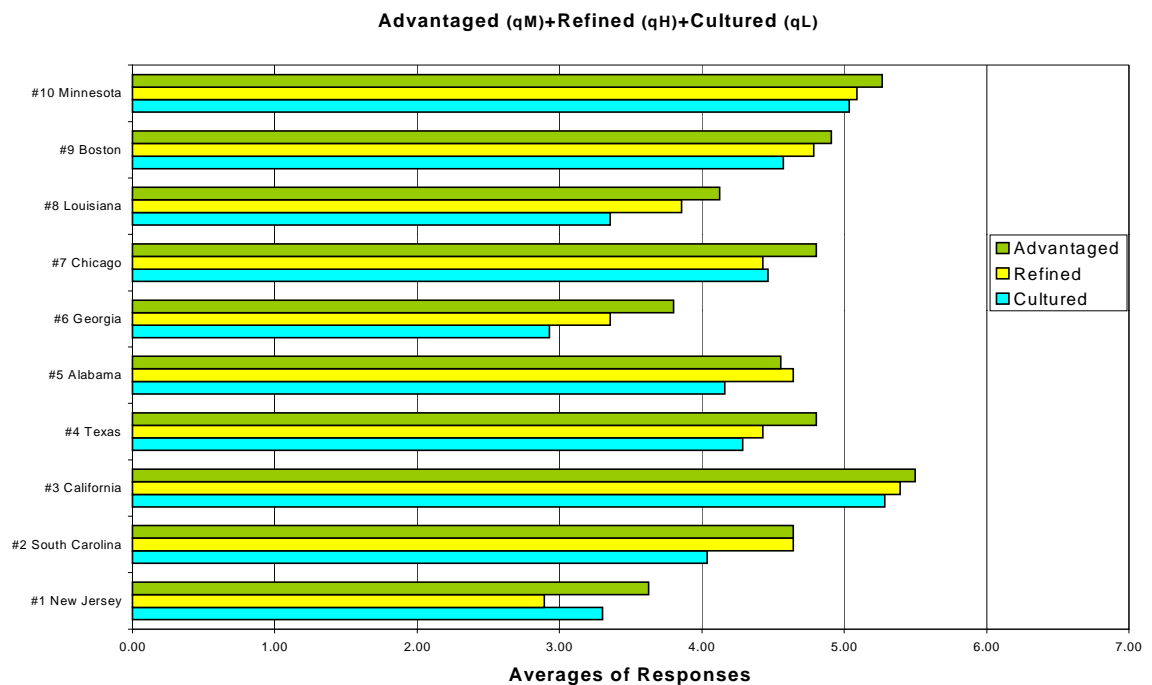


Figure 18. Averages of responses to qM (Advantaged), qH (Refined), and qL (Cultured).



The questions were analyzed to determine if any single factor had a greater or lesser impact in the overall computed averages. The results revealed that none of the questions had a substantial impact in the overall outcome. Removing each one from the overall average did not change the correlation between the two sets of averages (with and without the question). The results of these t-tests also revealed that at least two of the questions had no statistical impact on the overall average. It would seem that the two questions about “Charming-Irritating” and “Outgoing-Withdrawn” could have been removed from the without any real effect on the outcome. However, when we look at the results of the multiple regressions that compared the responses of all questions to the selection of job categories, we discover that the questions did serve a useful purpose. In the category of “high public contact,” “charming” was one of the strongest influences in decisions to select a particular speaker for that category. So, without that question, we might had the same general results, because the respondent would still have selected that speaker for that job category, but we would have less information about which factors appeared to have influenced the decision. Therefore, it is reasonable to say that each of the questions, while not greatly affecting the overall outcome, provided helpful information when looking at the data from different perspectives.

The questions were placed in a specific order and that order may have had some influence on the results. The first question asked for an overall impression. The investigator hoped that this would be an instant reaction after just having heard the speech sample, and would be a reaction similar to that which one might expect from a first impression. Job seekers are frequently advised that the first impression is extremely

important. Workshops and special seminars are conducted regularly on university campuses to coach graduating seniors on making the best first impression in hopes of having greater success with their employment interviews. This question was an attempt to capture that judgment.

The following 12 questions asked for specific judgments about certain characteristics. It was hoped that the respondents would answer those questions in either a conscious or unconscious effort to justify or support the initial response to the “overall impression.” The statistical analyses indicate that that may have been the case, as there was no difference between the average scores for qA and the computed overall average without qA. Respondents did in fact support their first impression with their responses to the following questions about specific characteristics, whether by conscious or unconscious intent.

The next two sets of questions asked for the respondent to place the speaker on the map, then decide which jobs would be most suitable for him. The last question was another general impression judgment that was much the same as “overall impression,” but which had more direct relevance to hiring: “Considering the culture/environment/climate of your company, this speaker would: Fit In Well...Not Fit In.” This final “wrap up” question gave the respondent another opportunity to make an overall assessment of the speaker, and it also introduced the concept of the speaker working in the same company as the respondent. Now the respondent had to consider not only his or her own reaction to the speaker, but decide how that speaker would likely be perceived and how successful he would be in the same company as the respondent.

The ANOVA analyses of the responses to the individual questions and the multiple regressions to determine the influence of those questions in the hiring decisions produced consistent results that were statistically significant and meaningful. Hypotheses 2 and 3, then, are supported by the research.

Hypothesis 4: Individuals do not accurately identify all regional accents.

The results are straightforward and clear, the research supports this hypothesis. The majority of the respondents did not recognize a majority of the speaker's accents. Only two out of the 56 respondents had recognition levels above 60%. Most had levels well below 50%. These percentages reflect the fact that the responses were weighted for levels of correctness. Examining the frequency with which respondents recognized the region without the weighting scale for correctness also reveals that a majority of the respondents failed to recognize the correct region a majority of the time.

Hypothesis 5: A speaker with a highly recognizable accent is more likely to be assigned less desirable characteristics than a speaker with a less recognizable accent. (The easier it is to recognize a person's accent, the more likely it is that the association is negative.)

It is clear in the previous evidence that people are generally not good at recognizing a speaker's accent, but there are some significant exceptions. Speakers #1 (New Jersey), #2 (North Carolina), and #8 (Louisiana) were much more highly recognized than other speakers by the majority of the respondents. They were correctly placed in their respective regions by a majority of the respondents. Many of those same respondents failed to identify the correct state within these speakers' regions, but they

were correct at the regional level. In the case of #1(New Jersey), many of the respondents selected New York instead of New Jersey, but they did place the speaker correctly in the Mid Atlantic Region. Both #1 (New Jersey) and #8 (Louisiana) received much lower scores than the speakers who were not as well recognized.

Speaker #2 (North Carolina) is an exception to the hypothesis and to the majority of the data. He was rated very highly for most characteristics and overall. He was also accepted for the more prestigious jobs quite frequently. One possible explanation for this contradiction in the data is that this speaker may have an accent that Labov (1972) described as more prestigious, generally associated with a genteel upper class which is found in North Carolina. In that case, Labov suggests that the reactions to the speaker would be more positive than otherwise expected. Preston (1998) refers to a similar concept as “covert prestige,” when describing the phenomenon of favorable characteristics being assigned to speech that is otherwise considered stigmatized.

A similar case could be made for #9 (Boston), because his accent was recognized fairly often, with 41% of the respondents at least placing him in the correct region and 25% also selecting the right state, yet also giving him fairly high ratings. Again, the Boston accent was identified by Labov (1972) as being considered a more prestigious sound, and that opinion seems to be reflected in this research.

Some stereotyped features are heavily stigmatized, but remarkably resistant and enduring.... Others have varying prestige, positive to some people and negative to others, like Bostonian or southern drawl. (Labov, 1972, p. 315).

The speaker from Texas (#4) was recognized with the exact same frequency as the speaker from Boston. He also received a very high overall average rating. However, a closer look at the incorrect responses may reveal interesting information that would explain why this apparent exception to the hypothesis occurred. Almost half of the respondents did not have any clue where this speaker was from. Only California (#3) and Chicago (#7) had more people fail to place them even in the right area of the country. Remember, any answer that would have placed him in the south would have earned the respondent a point, and the respondent would have been removed from this number of absolutely incorrect respondents. Consider also that almost half (23) of the respondents are from Texas. Perhaps respondents were showing some preference for an accent similar to their own. I will discuss this notion further in Other Findings.

In all other cases, it was true that the more recognizable a speaker's accent was, the more likely he got low ratings from the respondents. Likewise, the speakers who were not correctly identified, such as #3 (California) and #(10) Minnesota, were consistently rated highly. Respondents did not know where these speakers were from, and were more likely to assign positive ratings. The results of the statistical analysis support this hypothesis. The correlation is strong between a speaker being identified correctly and receiving lower scores on the responses about his personality and character traits.

Discussion

Other Findings

Originally, I intended to investigate two other hypotheses with this data. Those hypotheses were that listeners who have a high level of linguistic security will display preferences toward speakers who have accents similar to their own, and that the reverse is also true: listeners who have low linguistic security will dislike speakers who have accents similar to their own. In other words, if a listener likes his own speech, then he will like the speech of others who sound like him. If a listener does not like his own speech, then he will not like the speech of others who sound like him.

The instrument was designed to collect the information needed to carry out that part of the study. Several questions in the biographical section asked the respondent to identify, describe, and judge her own accent. Another question asked if she would change her accent if she could do so “as if by magic, with no cost or effort.” If a respondent answered the questions about her accent with positive descriptors (e.g., somewhat nice) and said she or he did not want to change it, then it seemed reasonable to proceed under the assumption that the respondent had a high level of linguistic security, a concept explored by Labov (1972) in his New York City study involving store clerks and stigmatized speech, and one which is the subject of much of his research. It should then follow, if the hypotheses were supported, that she or he should have rated speakers with her or his own accent more favorably than other respondents might have.

Unfortunately, the data collected for this project did not allow the investigation of these notions. There simply were not enough respondents included in this study to make such an investigation possible. To have meaningful results in this respect, the project would have needed a pool of respondents from each of the speaker's regions who claimed to have accents representative of that region, a significant number of whom who had high linguistic security, and another significant number who had low linguistic security, in order to compare their responses to the speaker of their accent. The pool would also need to be sufficiently large enough to discard those respondents from this analysis if they did not recognize a speaker as being one with the same accent. The respondent pool for this project did not meet these requirements, so this investigation was not formally pursued.

However, I looked at the data I did have in regard to these abandoned hypotheses, and there were some promising trends. They are presented here merely for discussion and because they do demonstrate the possibilities of using this collection instrument for such an investigation.

At first, I thought it would be possible get meaningful information, even with this small sample, by separating the respondents into "northern" and "southern" groups. That made groups of 14 Northerners, 32 Southerners, three who were either born outside the US, and three who moved too frequently during their pre-teen years to be able to claim one region. The responses to the speakers were compared between groups, as was the level of correct recognition of the speakers. The results, while not of much help in a formal way, were surprising and fascinating. There was statistically no difference in either the responses rating the speakers or the identification of the speakers. Even when

the Northern and Southern speakers were divided, and each group of respondents was examined to see if Northerners recognized Northerners and Southerners recognized Southerners more frequently than their counterparts, there was not any real difference. In fact, both groups scored exactly 44% on recognizing Southern speakers. Naturally, it was tempting to assume that these results were an indication that Northerners and Southerners not only think alike when judging accents, but also have equal skills in recognizing even the subtle differences between southern accents. That may well be the case, but these data cannot be the basis of any such assumption. The apparent similarities are easily explained when we consider that most of these “northerners” are currently living in the southwestern US, as is evidenced by the very fact that they participated in this project. The data collectors did travel to South Texas, Oklahoma, and Kansas, in order to provide as much geographic variety as possible for the study, and a few of the respondents were national recruiters who were travelling through Texas on business, but most live not only in Texas, but within a 50-mile radius of the Dallas/Forth Worth metroplex. Again, these numbers have no real meaning, because of the small samples, the difference in the sizes of the subgroups within the samples, and because of the geographic bias, but at least they provided some interesting fodder for future investigations, as did this next subgroup of respondents.

Twenty-three of the respondents grew up in Texas. Their responses were separated for this investigation from those of all of the other 33 respondents. They were then sorted for whether or not they claimed to have a Texas accent. Two questions determined this. First, they were asked to identify the region on the map where people

speak most like they do. If the respondents did not specifically choose Texas, they were eliminated. If they said they wanted to change their accents (Bio N), they were eliminated. Then, Bio Ia asked them to describe their own regional accent on a scale from “none at all” to “very strong.” Of course, if they really thought they had “none at all,” it was unlikely that they would have chosen Texas as the place where people speak most like they do, so it was not surprising that none of these respondents denied having some level of accent.

Bio J asked them to judge their own accents on a scale from “very bad” to “very good.” Those who answered below the neutral level (4, “I can’t decide) were eliminated.

Then, the respondents were once again sorted for whether or not they had identified the Texas speaker accurately to the state level. That left only four respondents who said they have Texas accents, who like and do not want to change their accents, and who correctly recognized the Texas accented speaker.

Those four respondents were then separated from the rest of the Texan respondents. At first, the average scores they assigned the Texan were compared to the other groups of respondents (other Texans and all others). The results were interesting. The whole group had assigned the Texas speaker an overall average of 4.99. These four respondents gave him the highest rating of any speaker, 5.50. The next closest speaker was Minnesota with a drastically lower 4.96. North Carolina was rated at 4.89, Boston at 4.75, Louisiana at 4.71, completing the top half of the rankings from these Texan respondents. They rated Alabama with 4.64, California, at 4.59, Georgia at 4.45, Chicago at 4.39, and New Jersey at 3.98.

Notice the dramatic difference from the whole group in the ratings of California and Louisiana. California, the top rated speaker by the whole group, fell to 7th place in the rankings of these four Texans. Louisiana rose from 7th place in the whole group's rating to 5th place, which is especially interesting if we consider that the Louisiana speaker was also from the South West Central Region (same as the Texas Speaker) and was placed above both Alabama and Georgia, as well as above Chicago by these Texans. These four respondents could not in any way be considered a significant group of people on which to base any real analysis, but they certainly did seem to prefer their own accents and the speakers who sounded most like them.

Next, I sorted all of the respondents based on where they had guessed a speaker to be from, regardless of how accurate the guess was. I then took all the responses for those speakers who were labeled as being specifically from Texas, minus all of the Texas respondents. Non-Texans gave these responses when they thought they were judging a Texas accent. The average for those scores was a 4.66. I then took all of the non-Texans who had correctly identified the Texas speaker, and averaged their responses for the Texas speaker. That average was 4.87, well below the overall average the Texan received when the Texas responders were averaged into his score (4.99). Obviously, the four linguistically secure Texans liked their own sound quite a bit more than the rest of the respondents liked it.

It is also interesting to note that only four people out of the 56 said they would change their accents, even if they could do so as if by magic, without cost or effort. Two

of those respondents were born outside the United States, and claimed to have foreign accented speech. None of the 23 Texan respondents wanted to change their accents.

For further investigation in this area, another question on the survey would be helpful. After each speaker, the respondent should be asked to what extent the speaker sounds like the respondent. The question would be worded along the lines of : “This speaker sounds – just like I do, a lot like I do, somewhat like I do, I can’t decide, fairly different from me, a lot different from me, nothing at all like I do.” The answer would be one more link to making the connection that the respondent thinks the speaker has his own accent, and might help to answer the questions raised by these abandoned hypotheses.

Strengths and Weaknesses of Instrument

The survey instrument was a success. Having the instrument utilize compact disks allowed it to be duplicated easily and allowed for several people to assist with the data collection. The disks also made the instrument easily portable, and enabled the researchers to go to the respondents, rather than having to have them come to a central location. Given the nature of the project, it was important to have respondents who were working professionals, and it would have been practically impossible to have gathered the data from as many as we did if the project had not been portable.

The data were collected on floppy disks and copied directly into the database, so there was much less chance for error in the transfer of information than exists when the data must be dealt with by human intervention.

The instrument was attractive, with appropriate graphics and music. The digital sound quality, important for judging speech samples, was easily controlled and duplicated precisely for each respondent.

Overall, the respondents enjoyed participating, and often indicated they would be willing to participate in further research of a similar nature. They liked the instrument and the subject matter. Almost all of the respondents asked to receive a copy of this report. Their interest in the outcome of the research reflects what the investigator found to be true at all phases of this project: most people are interested in this type of research and are eager to participate. Regional accents seem to be popular subjects. As has been discussed previously in the report, accents are personal matters, and people tend to equate criticism of their accents with criticisms of them personally. Perhaps they are right.

Strengths and Weaknesses of Reading Passage

The reading passage was a weakness of the project. The decision to use a reading passage was debated and discussed at length before proceeding. Free speech samples would certainly have allowed more natural accent samples. However, the respondents could easily have reacted to what the speaker said rather than his accent, and there would have been no way to know that the different responses were stimulated by the accent. Even the most innocuous topic is certain to elicit negative reactions from some respondents. Free speech also introduces the possibility of regionally specific lexicon and phrases that would either further prejudice the listener, or it might help the listener to identify the region. Of course, there is no way to know with absolute certainty that the responses in this study were in fact reactions to accents, either. By using the reading

passage, however, we can be slightly more confident that the accents were at least a part of the decision to rate some speakers higher than others.

The passage had to be short, so not all of the phonetic environments were in it. This might have limited the recognition of some of the accents. The passage was also quite casual, and the subject matter was a lazy Saturday morning breakfast. The idea behind using that type of passage was quite simple. The goal was to approximate the sound of careful speech. Reading is formal speech, so I tried to make the reading as informal as possible. The passage also had to be about something that could apply equally to all ten men from all different parts of the country. It could not have references to beaches, mountains, riding subways or horses, or anything that might have sounded out of place for one of the speakers to be saying. Saturday morning breakfast seemed to be a safe enough topic in that regard, but a passage should be developed to include a better range of vowel environments, one that is casual but does not make the speaker seem lazy.

Perhaps the greatest criticism of the passage is that it ended with a statement of the reader's intention to take a "nice, long, nap." Some of the respondents said that statement affected their answer on the first speaker about whether he was "lazy" or "energetic." They also reported that by the time the respondents had heard the passage read by the second and following speakers, they were used to it and did not have the problem separating what the passage said with the judgments about the speaker. This is where the randomized speaker selection really paid off. All of the speakers had equal opportunity to be randomly selected as the first speaker by both the respondent and the

computer's random assignment for each respondent. So no one speaker absorbed that learning curve, and the data from that question could be considered along with the rest.

Strengths and Weakness of Speech Samples

The speech samples were generally very good representations of the region they were intended to reflect. Each of them was recognized by test respondents from their own region, and were judged by at least two test respondents from that region to be representative samples. However, there were not enough of them to truly compare the reactions to all regional accents in the US. In addition, of the 10 subject speakers, five of them were from Southern regions, which left only five for representing all of the rest of the country. The five Southern speakers were selected intentionally, because it was anticipated that the respondents would mostly also be southerners and we could therefore get a more accurate and meaningful test of their ability to recognize and make distinctions among accents from the South.

The limit of only 10 speakers was a problem for this study, and it will likely be a problem for any such study because of the length of time it would take for a respondent to listen and react to more speakers. Even if the respondents were willing, the issue of exhaustion and boredom start to become problematic with any larger number of speech samples.

Strengths and Weaknesses of Respondent Sample

The respondent sample was large enough to produce significant results that are, with a high probability, representative of other groups of people who hire. They represented a broad range of businesses, ages, and levels of experience. There was a good mix of male

and female respondents. But one of the limitations of the sample was that half of the respondents were from one region of the country – the region where the study was conducted – the South West Region. Almost half of them had also spent the majority of their pre-teen years in the same state – the state where the study was conducted – Texas. For the results to be truly meaningful, the project would need to include many respondents who represent all of the regions in the US. I was not able to complete all of the originally intended investigation because there simply were not enough respondents from each of the regions to make any meaningful comparisons among them. In any interpretation of this report, the possibility of a regional bias that would lessen its usefulness as a predictor of other groups must be examined with the utmost care.

Strengths and Weaknesses of Questions in the Instrument

The questions were selected because they are the types of judgments that are commonly made about employment candidates, whether consciously or unconsciously, by the interviewer. These questions did not ask the respondent to guess the age, weight, height, ethnicity, religion, or anything about the appearance of the speaker. Those responses might have been interesting, but most of those types of judgments (except appearance) are legally forbidden from the employment decision and professional interviewers are careful to avoid those pitfalls. So these questions attempted to ask judgments that may be associated with accent, but which are not illegal considerations in hiring decisions.

The questions were carefully worded with different “lead-in’s” to allow the respondent to answer that a speaker “sounds” or “seems to be” without actually saying the

speaker “is” charming, intelligent, educated, etc. One question asked the respondent to predict how the speaker would perform on the job by asking, “On the job, I would expect this speaker to be...(competent-incompetent).” Because the respondents were all professionals who hire others regularly, it was anticipated that they would be reluctant to actually say that a particular speaker “is” outgoing, assertive, refined, etc. So the lead-in’s may have allowed the respondents to relax a bit and give more honest reactions based on what they heard and not what they think would be an inappropriate label for the speaker based on lack of information.

During actual employment interviews, interviewers have real information about a candidate and (ideally) they guard against making unjust assumptions without information to support them. For instance, the interviewer would most likely have a candidate’s resume and would know whether the he or she was in fact “educated” without having to rely on how the candidate sounds. But two factors make the reactions they had to these speakers extremely important.

First, interviewers do make judgments based on all information available to them. They must. They make decisions to hire or not to hire based on those judgments. Their own success and the success of their departments and companies depend greatly on choosing the right people to hire. Making a bad decision can have harmful consequences, so they develop the ability to predict a person’s success on the job based on the few minutes of time spent in an interview. They learn to use all of their perceptions as well as factual information to make those decisions. Because their judgments make a big difference in people’s lives, it is important to know all of the factors that might influence

them. Certainly, we cannot always know what gets one candidate chosen over another. But if we see that patterns imply certain characteristics have consistent results, then it is appropriate to discover the extent to which those characteristics are actually influencing hiring decisions.

Second, some of these judgments are being made, even if unconsciously, based on perceptions rather than fact. Otherwise, no respondent could possibly have answered any of the questions with anything other than the neutral “I can’t determine,” which was available to them for every question. If the respondents had done that (selected the neutral response), the results of this study would have been quite different. None of the statistical analyses would have produced significant numbers, and the hypotheses of the study would not have been supported.

But that was not the case. The respondents were professional people who make these kinds of judgments about people every day, and they were willing to make these judgments about these speakers. They did not have a resume in front of them, nor did they have any knowledge of the speaker other than having heard his voice reading the same passage that was read by all the other speakers. So, when they were willing to say “this speaker sounds intelligent,” that was indeed a perception about a characteristic that is desirable in employment candidates, and it was based on something. That something was likely to have been their regional accents, because that was the greatest difference among these speakers that could have been perceived based on merely hearing them read a passage. Therefore, the statistical results do seem to be both significant and meaningful.

Regional accents probably do make a difference in how a speaker is perceived, and those perceptions can make a difference in how a speaker is judged in hiring decisions.

Strengths and Weaknesses of Speaker Identification

To determine whether or not a speaker was correctly identified required converting the nominal information in the database to a scoring scale that could be compared in a meaningful way. For this scoring system, geography gave way to a very generalized linguistic theory. Rather than make the determination strictly on the geographic accuracy of the respondents' answers, the scoring attempted to measure how accurate the answers were with regard to dialect regions. Dialectology research is primarily concerned with the factual differences between regions, and includes all aspects of speech, not only usage and lexicon but also accent.

For this study, perceptions of the listener were more important than whether or not the answer was technically accurate. On the other hand, it was necessary to assess the relevant accuracy of the answer as to whether or not it was anywhere near accurate geographically. For this part of the study, a liberal interpretation of Carver's (1989) broad divisions of North and South was employed. The divisions could not be used with any measure of loyalty to his actual maps, nor could this study utilize the dialect maps of any of the other studies because this study used basic geographic regions for the choices, and those regions simply do not correspond precisely to any of the systems for dividing the country linguistically. This may have been an inherent weakness in the design of the instrument as far as pure linguistic research is concerned, but it did serve the purpose of discovering generally how accurate people are when they identify a speaker as being from

a particular part of the country without complicating their guesses by supplying labels for regions that would have given clues about the dialect labels for the regions. In other words, respondents did not get to choose a region based on their own preconceptions of what “Midwestern” speech is, even though the vast majority of us refer to “Midwestern” accents regularly.

When a respondent selected a particular region on the computer screen depicting the United States divided into geographic regions, the selected region was enlarged and the respondent was invited to select a specific state within that region. If the correct state was selected, that meant that the respondent had already selected the correct region. Selecting the correct region was worth two points. Selecting the correct state was worth one additional point. Selecting a region that was adjacent to the correct region and also in the same broad dialect category of Carver (1989) of North (which included Upper North, Lower North, and West) or South (which included Lower South and Upper South), earned one point. All other answers received zero points. This division of North and South parted from Carver’s categories when the Western and Southwestern speakers were scored, in that he would have considered them to be in the broad category of “North.”

For this study, all of Texas was considered “South” and areas west of the Mississippi were considered “West.” So, a respondent who said the speaker from California was from Michigan would not have received any points. But if the respondent said the California speaker was from Arizona, the respondent would have received one point. Likewise, a respondent who placed the Georgia speaker in Texas would have received one point. It was important to give respondents some credit for knowing that the

accent was not from some areas, even if the respondent did not know the exact region. For instance, if respondents placed the speaker from Georgia in the South West Central Region (SWCR), the respondents were at least indicating that they knew the accent was not from the Northern, middle, or Western regions, and even that level of recognition was factored into this scoring system.

The scoring system for awarding points for getting anywhere near the correct region may seem generous. But I wanted to be sure that if this study concluded that people do not in fact recognize regional accents, that indictment should be based on the most conservative interpretation of whether or not a correct identification was made. It might be easy to state that listeners do not accurately identify a New York City accent if listeners did not exactly identify the city, yet it would not be justified to base that decision on a very strict interpretation of “correct.” What if the vast majority of listeners at least identified the New York state or surrounding area? If all the listeners were from the region in question, perhaps it would be reasonable to expect that they would have the ability to identify the accent more specifically, but when the respondents are from a wide range of locations from across the country, it seems unlikely to expect that level of recognition, but unfair not to give credit for knowing the generally correct area associated with the accent. Certainly, Texans might be able to identify specific accents common to specific regions within the state, but it is unlikely that we will find people from other areas of the country who can do so. The respondents in this study were from a broad range of geographic locations and were responding to speakers from many areas of the

country. Therefore, general identification was considered to be important, and a generous level of scoring for correctness was devised.

Implications for Future Research

Hopefully, much more research will be conducted to continue to discover the way regional accents influence important decisions made by and about us. Even better results would be ones that contradict these results and convince us that regional accent biases do not exist in any harmful way. Because of the small sample size and the potential for a regional bias within the sample, this study should be viewed as an expanded pilot study that simply suggests there is enough evidence to continue the investigation. In addition to testing the myriad of other regional accents that were not selected for this study, other factors need to be considered for what effects they may also have in our reactions to regional accents. Some of these factors are gender, ethnicity, race, and age. If the subject speaker is an older Southern woman, will the responses differ from those to a younger Southern woman (or man)? These are good questions that can be explored by future studies. The basic design of the instrument works well to gather the data needed, and can easily be altered to include different speech samples and different questions.

During the execution of this project, questions most frequently asked of me by non-linguists can be quite simply summed up as: “What effect does my accent have on me when it comes to my success in an interview? Does the interviewer’s accent matter?” This study does not answer those questions. It does lay some groundwork for getting those answers, and at least it has helped us to identify the great need for much more work.

It is important that linguists work with hiring professionals to develop the research. People who hire others are interested in learning about this topic and are interested in finding a way to minimize any unfair prejudice that finds its way into hiring decisions. They have the expertise to assist in developing the research and the resources to conduct the study with a much larger sample of respondents than linguists could ever accomplish working alone. Therein also lies the solution.

Ultimately, there is an opportunity for this research to help us decrease tendencies toward bias either for or against regional accents. Once we have identified, measured, and labeled those biases, we can correct them. One possible way to accomplish this is by using an instrument such as this one that has a slightly different design and approach. That instrument could be administered to people who hire others as an instructional tool. The participants could react to and make judgments about various subject speakers in much the same way as they did in this study. But, the instrument could be designed to give them instant feedback at the end of it concerning the accuracy of their judgments and how well they identified the accents. The instrument could then summarize where the participant's biases are most likely to occur, and alert them to be especially careful when considering candidates with these accents. In many cases, merely having that information and knowing that the employer does not support accent discrimination would likely have a great effect in reducing the influence of regional accents in hiring decisions.

That opinion is supported by observations of the respondents of this study, who consistently reacted with surprise and dismay when they learned one fact about the speakers they had judged – the real education levels. After the survey was completed,

there were always comments and discussion with the data collectors about it. Comments were usually made about how accurately the respondents thought they had identified the speakers. Often, they would ask the collectors where a particular speaker was really from. The collectors, of course, did not have that information. The random speaker assignment by the computer meant that speaker #5 was different for each respondent, so no one knew which one the respondent heard in that position. During those discussions, the collectors often told the respondents that the speakers all have college degrees and most have doctoral degrees. In most cases, the respondents reacted with shock and disbelief. Many asked if they could take the survey again because they were embarrassed about their answers. Such reactions indicate that a carefully designed instructional instrument could help participants to lose confidence in some of their own judgments about people based on preconceptions about regional accents. Then real learning and change would be possible. Linguists and Human Resources professionals must unite to make such change more than just a possibility – to make it become a reality.

Conclusion

Certainly, the statistical results of this study indicate that when presented with samples of various US regional accents, individuals do indeed make positive and negative judgments about the speaker, even though they have no other information with which to make those judgments. These results are not surprising. A review of the literature and previous research supplies overwhelming evidence that linguists, attorneys, human resource professionals, and most speakers of English have observed, measured, and

experienced unfair judgments made by listeners about speakers concerning every aspect of spoken language.

This study was limited to the regional accent, which separates it from most of the other studies that have been conducted. In addition, this study used the latest technology by employing computers, compact disks, digital audio reproduction, computerized databases, and computer-aided analysis. Two of the greatest differences between this study and others were: 1) the combination of the use of actual speech samples in conjunction with judging the speaker, attempting to identify the speaker's accent region by using an interactive computerized map, selecting the speaker for jobs, and the attempt to determine the linguistic security of the respondent, and 2) the collection of data from a wide range of respondents who regularly make and act upon the judgments measured in this study – people who hire other people.

Perhaps the most important contribution of this study is that it is yet another example of how it is possible to apply linguistic theory in a practical and important way for the non-linguist. This study investigated the influence of regional accents for people who are engaged in a common yet extremely important specific interaction – the employment interview.

Statistically, there seems to be a relationship between the answers the respondents gave concerning the individual characteristics and the choices they made for which job categories were appropriate for each speaker. But what does that really tell us? This was a small study conducted in one part of the country. Although great care was taken to eliminate or control as many variables as possible, projects such as this cannot possibly

do so completely. Much more research is required before any real conclusions should be drawn.

This information presented in this study provides evidence that listeners do judge speakers differently, and the data from this study support the notion that the speakers' regional accents were most likely involved in those judgments. But what does that really mean? Listeners always make judgments about speakers. That is nothing new. In fact, we depend on all the clues we get from our interactions with others to make assessments and act on those assessments in some very important ways. If we perceive that a person is hostile, unstable, or irrational, we may react by getting away from that person, and may actually be saving ourselves from physical harm. If we perceive that a person is distressed or uncomfortable, we may be able to offer assistance or react in some compassionate way that helps that person. If we judge that a person is interesting, funny, or similar to us, we may encourage further interaction that develops into relationships that add untold meaning to our lives. So when a listener judges a speaker, in and of itself that judgment is not bad. Regional accents are part of how a speaker sounds. It is one of the clues we use to know something about the speaker. The accent, like ethnicity, race, age, dress, mannerisms, and how the speaker uses language, can give us great insight into a person's background. So why do we care if people make distinctions between regionally accented speakers?

Ideally, we should encourage listeners to hear and appreciate the great variety of speech patterns that help to form a region's unique heritage and allow its speakers to identify with and belong to the region even when they are far away from it. US regional

accents are varied, interesting, and beautiful; and having them enriches the whole of our culture. If that is true, then why should a study like this one be conducted?

The answer is that the judgments we make about a speaker should be based on real information, and not on hidden perceptions that may bias our reactions to the speaker without our permission or even without our knowledge. If this research is any real indication of how we truly react to regional accents, we do not simply use the regional accent as a way of knowing about and appreciating our fellow humans. We may either use the accent against the speaker, or grant the speaker favorable status unwisely, based on non-information we think we have because of the accent.

The fact is that we talk differently from one another. The fact is that the difference in the way we talk does not really tell us anything about the speaker other than where he is from. The fact is that we do tend to assume a lot more information about a person when we hear certain accents than others. We may instantly assume a person is rude and aggressive when we hear a sound we associate with the New York City area. As soon as we think we have heard an accent from Chicago, we may instantly assume the person speaks abruptly and says exactly what he or she thinks without regard to the feelings of others. We may assume another speaker to be slow-witted or unintelligent when we hear what we think is a southern accent. We may assume another person to be cultured, refined, and intelligent simply because we cannot tell where the accent is telling us he or she comes from. Yet another speaker's accent may lead us to think of him or her as trustworthy without knowing this to be true. The simple fact is, absolutely none of these characteristics can accurately be detected on the basis of an accent.

In defense of these long-held preconceptions, we could take the position that no real harm may result from our incorrect perceptions about regionally accented speakers. Our opinions may be formed, but those are personal opinions, and do not have harmful results for the speaker. Under some circumstances, that may be true. But other times, that is not true. There are times when our preconceptions undermine our actions, and that is really the basis of all unfair discrimination. The employment interview is one of those times.

It is extremely important for those who hire to make good decisions. Making a bad decision and hiring the wrong person can be costly, even devastating to a small company or a single department. Passing up the opportunity to hire someone who could have brought great skills and abilities to a position and could have made great contributions to a company is also a bad decision. Of course, we rarely know about those missed opportunities. When we do not hire someone, regardless of the reason, we rarely have any further interaction with him, so we do not know that we made a bad decision.

If a decision to hire or not hire someone is influenced at all by the candidate's accent, whether the accent is identifiable or not, then the decision is not as good as it could have been. That influence has no place in our attempts to make the right choices about hiring others, and that is why this study and others like it are important to all speakers of English. We all have accents. Some of our accents are more easily recognized than are others. We all interact with others who have accents. Some of them have accents that are more easily recognized than are others. We must not give those accents the power to influence decisions we make about one another.

The results of this study might prompt some people to try to change their accents. That would be a shameful outcome of this research. There was a time when people were judged by other factors that were not good bases on which to make decisions about hiring or not hiring. Decisions were influenced on long-held beliefs and preconceptions that were simply wrong, both factually and ethically. The color of skin, the ethnicity, the religion, the gender, the age, the national origin of employment candidates – all of these were thought to give information which was largely acceptable to consider when hiring someone. That sounds preposterous to most of us nowadays, but there was a time when those judgments seemed reasonable. It was only through investigation, research, and sweeping social reform fuelled by government intervention and legislation, that we have been able to lessen the occurrence of those illegal and wrongful discriminations. So it is with a person's accent. No, it is probably not illegal to use accent as a factor in making decisions, but it is my firm belief that most people who hire other people truly do attempt to avoid discrimination -- not only because it is illegal, but also because it is wrong. If we enlighten ourselves, if we identify and accept the fact that we are making wrongful assumptions about a person based on accent, then we can and will change that.

Suggesting that a person should attempt to alter an accent so that he or she will have greater success in the employment interview is appalling, and is no different from suggesting to someone during the 1960's that he or she should change gender, ethnicity, race, or religion. It is not the speakers who must act on the information presented in this preliminary (and far from conclusive) report. Rather, it is the listeners, the ones who are allowing preconceptions, biases, and misinformation to influence their hiring decisions

who must carefully consider the validity of the information in this study, and act on it if they deem it to have any merit at all.

Our accents are connections to our heritages. We should be able to speak our native regional accents with pride and without fear of the judgments of others that are based on that one clue about who we are. If every speaker of English sounded the same, we would lose a rich and colorful part of our American culture. Once, during a class that combined the subjects of linguistics and literature through in depth studies of poetry, the professor asked the class to read a poem aloud. Each person was to read one line of the poem, but there was no particular order in which we were to read. If you felt like it, you were simply to fill the silence by reading the next line yourself. No one knew who would speak next. The room was quiet. Then, one by one, the students began to read the lines. The students were from many parts of the country and other nations, were both male and female, and ranged in age from twenty to sixty. At the end of the poem, the professor allowed the quiet stillness of the room to linger for a few moments, then he spoke these few words very softly. He said, “Did you hear that? Wasn’t that beautiful? That, my friends, was the sound of the composite of humanity. All the differences in our voices and accents made the poem come alive as if with music.” Let us, then, appreciate the variety of sounds and celebrate their differences!

APPENDIX A

SCRIPT

Accent Discrimination Study Script

1 Notes: Play audio of following script w/background music and fade in files with words:

Script file = **1aud**:

Thank you for participating in this University of North Texas research project. You will listen to 10 readings of short passages. After each reading a series of questions will be asked regarding your impression of the speaker himself, not what he read. There are no right or wrong answers and the content of the passage is irrelevant to the questions. The success of this project depends upon natural reactions, so please respond as quickly and honestly as possible. Total anonymity is guaranteed.

2

Notes: Graphic of screen w/radio and arrow key moves to click a button, then to the Pause button (sync w/audio)

Script file=**2aud**:

The radio buttons numbered 1 - 10 located in the upper right corner will play a reading when you click on each one. Begin the program here. You may select the readings in any order you wish. (pause 2 seconds)

3

Notes: Graphic of screen w/1 example question and responses showing. Show mouse moving over responses and highlights appearing, select a response, click next button (sync w/audio)

Script file=**3aud**:

Once you have listened to a reading, the first question will appear in the radio speaker area on the left side of your screen. (pause 2 seconds) **A display of responses for you to choose from will appear on the radio's dial to the right.** (pause 2 seconds) **As your mouse rolls over the responses, each will light up. Click on your choice when it is highlighted.** (pause 2 seconds) **Afterwards, click on the arrow button found in the lower right corner of the radio speaker to move to the next question.**

4

Notes: Graphic for Screen 3 remains w/this script, file=**4aud**

The program takes approximately 30 minutes to complete. Please select a radio button to begin.

A

My overall impression of this speaker is:

- 7: Extremely Positive
- 6: Rather Positive
- 5: Positive
- 4: I can't decide
- 3: Somewhat Negative
- 2: Negative
- 1: Extremely Negative

B

This speaker seems to be:

- 1: Extremely Uneducated
- 2: Uneducated
- 3: Somewhat Uneducated
- 4: I can't decide
- 5: Somewhat Educated
- 6: Well Educated
- 7: Highly Educated

C

This speaker seems to be:

- 7: Extremely Intelligent
- 6: Intelligent
- 5: Fairly Intelligent
- 4: I can't decide
- 3: Not Too Bright
- 2: Not Bright
- 1: Not At All Bright

D

This speaker seems to be:

- 7: Very Energetic
- 6: Energetic
- 5: Somewhat Energetic
- 4: I can't decide
- 3: Slightly Lazy
- 2: Lazy
- 1: Very Lazy

E

This speaker seems to be:

- 7: Extremely Laid Back
- 6: Laid Back
- 5: Somewhat Laid Back
- 4: I can't decide
- 3: Somewhat Up Tight
- 2: Up Tight
- 1: Extremely Up Tight

F

This speaker seems to be:

- 7: Extremely Outgoing
- 6: Outgoing
- 5: Somewhat Outgoing
- 4: I can't decide
- 3: Somewhat Withdrawn
- 2: Withdrawn
- 1: Extremely Withdrawn

G

This speaker seems to be:

- 7: Extremely Assertive
- 6: Assertive
- 5: Somewhat Assertive
- 4: I can't decide
- 3: Somewhat Docile
- 2: Docile
- 1: Quite Docile

H

This speaker sounds:

- 1: Extremely Rough
- 2: Rough
- 3: A Little Rough
- 4: I can't decide
- 5: Somewhat Refined
- 6: Refined
- 7: Extremely Refined

I

This speaker sounds:

- 7: Quite Charming
- 6: Charming
- 5: Somewhat Charming
- 4: I can't decide
- 3: Slightly Irritating
- 2: Irritating
- 1: Very Irritating

J

This speaker sounds:

- 1: Extremely Unfriendly
- 2: Unfriendly
- 3: Somewhat Unfriendly
- 4: I can't decide
- 5: Rather Friendly
- 6: Friendly
- 7: Quite Friendly

K

On the job, I would expect this speaker to be:

- 7: Very Competent
- 6: Competent
- 5: Somewhat Competent
- 4: I can't decide
- 3: Somewhat Incompetent
- 2: Incompetent
- 1: Very Incompetent

L

This speaker sounds like he is from a background that is:

- 7: Highly Cultured
- 6: Cultured
- 5: Somewhat Cultured
- 4: I can't decide
- 3: Somewhat Earthy
- 2: Earthy
- 1: Very Earthy

M

This speaker sounds like he is from a background that is economically:

- 1: Severely Disadvantaged
- 2: Disadvantaged
- 3: Somewhat Disadvantaged
- 4: I can't decide
- 5: Somewhat Advantaged
- 6: Advantaged
- 7: Highly Advantaged

N1

This speaker sounds like he is from what geographic region? Please click on your choice.

Notes: Graphic of U.S. with regions in different colors **with option available for can't determine. Go to N2 unless can't determine, go to N2b

N2

Can you be more specific? If so, click on a state, if not, click the continue button.

Notes: If click continue or on a state, go to N2b unless click Texas, Illinois, New York, or Massachusetts, then go to N2a

N2a

Can you be more specific? If so, click on the area you think the speaker is from.

Notes: Display appropriate state map. If click on NYC, Bos, or Chi, go to O. Others go to N2b.

N2b

Do you think this person is from a rural or urban area?

- 1 Rural
- 2 Urban
- 3 Can't Determine

Notes: 3 words to click on map. Continue to O.

O1-5

For which of the following types of jobs would this speaker be best suited?

(select all that apply) 1 selected/0 not selected:

- O1** NONE
- O2** Positions involving a high level of public or customer contact
- O3** Positions involving a high level of technical expertise, but little public or customer contact
- O4** Positions involving extensive internal communications
- O5** Positions involving little technical expertise or little public or customer contact

Notes: Choices appear on speaker w/radio buttons to click.

P

Considering the culture/environment/climate of your company, this speaker would:

- 1: Not Fit In
- 2: Not Fit In Well
- 3: Possibly Not Fit In
- 4: I can't decide
- 5: Possibly Fit In
- 6: Fit In
- 7: Fit In Well

Notes: Play aud5 after each speaker until 10 are complete, then play aud6 and jump to BioA.

Script file = **aud5**:

Please select a different speaker by clicking a new radio button.

BioA

How would you describe your employer's culture/environment/climate?

- 7: Highly Formal
- 6: Formal
- 5: Somewhat Formal
- 4: I can't decide
- 3: Somewhat Laid-back
- 2: Laid-back
- 1: Very Laid-back

BioB

Are you Male or Female?

- M: Male
- F: Female

Notes: This goes on the radio dial.

BioC

In what year were you born?

19xx

Notes: Graphic of the number 19__ and 2 columns of numbers 0-9 below w/radio buttons by each to click. When numbers clicked, they appear in the blank next to 19.

BioD

Where did you spend the majority of your preteen years?

- 1: USA
- 2: Other
- 3: Moved Frequently, Cannot Claim One Region

Notes: On the radio dial ; If USA, go to BioEa, if Other, go to BioFa

BioEa

Notes: Graphic of U.S. with regions in different colors. When mouse rolls over region highlights.

BioEb

Can you be more specific? If not, click continue.

Notes: Graphic of region displays. If click continue or on a state, go to BioGa unless click Texas, Illinois, New York, or Massachusetts, then go to BioEc

BioEc

Can you be more specific? If not, click continue.

Notes: Display appropriate state map w/cities indicated. If click on NYC, Bos, or Chi, go to BioGa.

BioFa

Please click on the continent that applies.

Notes: Graphic of World with continents in different colors. When mouse rolls over, highlights. Click on continent and dropdown box appears with country names for selection. Text appears:

Please click on the country you spent the majority of your preteen years in.

BioGa

In which geographic region of the U.S.A. do people speak most like you do?

Notes: Graphic of U.S. with regions in different colors. When mouse rolls over region, it highlights.

BioGb

Can you be more specific? Please click a state or continue.

Notes: If click continue or on a state, go to BioH unless click Texas, Illinois, New York, or Massachusetts, then go to BioGc

BioGc

Can you be more specific? If so, click on the region you think the speaker is from.

Notes: Display appropriate state map. If click on NYC, Bos, or Chi, go to BioI. Others go to BioH.

BioFb

Is English your native language?

- 1: Yes
- 0: No

BioH

Do you sound rural or urban?

- 1: Rural

2: Urban

Notes: Words to click beside map

BioIa

How would you describe your own regional accent?

- 1: None At All
- 2: Light
- 3: Hardly Any
- 4: I can't decide
- 5: Moderate
- 6: Fairly Strong
- 7: Very Strong

BioIb

How would you describe your accent when speaking English?

- 1: None At All
- 2: Light
- 3: Hardly Any
- 4: I can't decide
- 5: Moderate
- 6: Fairly Strong
- 7: Very Strong

BioJ

Do you think your accent sounds:

- 7: Very Nice
- 6: Nice
- 5: Somewhat Nice
- 4: I can't decide
- 3: Somewhat Bad
- 2: Bad
- 1: Very Bad

BioK

When you speak, how easily do people identify your accent?

- 1: Easily
- 2: With Some Difficulty
- 3: Not At All

BioL

Have you ever received attention because of your accent?

- 1: Yes
- 0: No

Notes: Answer on radio dial. If yes, go to BioLa, others go to BioM

BioLa

Generally speaking, the attention has been:

- 7: Very Positive
- 6: Positive
- 5: Somewhat Positive
- 4: I can't decide
- 3: Somewhat Negative
- 2: Negative
- 1: Very Negative

BioM

Have you attempted to alter your accent?

- 1: Yes
- 0: No

Notes: Goes on radio dial. If yes, go to BioMa, others to BioN

BioMa

How much has your accent changed by your intentional efforts?

- 1: Drastically Changed
- 2: Significantly Changed
- 3: A little Changed
- 4: Not At All Changed

BioN

If there were a way to change your accent without cost or effort (i.e., by magic), would you want to do so?

- 1: Yes
- 0: No

Notes: Goes on radio dial. If yes, go to BioO, others jump to End

BioO

What region would you choose to sound like?

Notes: Display U.S. map of regions to click

Close

Credits:

Patricia Cukor-Avila, PhD. - Author, Executive Producer

Dianne Markley - Author, Executive Producer

Jenny Jopling - Producer

Jack Becker, PhD. - Statistical Consultant

Joesph Hoffmann - Lead Programmer

Abraham Bencid - Artist, Sound Editor

Carla Marion - Narrator

Music by Eric Keyes and Riddle Me This

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Notes: Closing graphic with background music, rolling credits, and script below. Display “saving data to c:/untdata”

Script file = **aud6**

You have completed the survey. Thank you for your time and effort.

APPENDIX B

INSTRUCTIONS FOR SURVEY PARTICIPANTS

Thank you for participating in this research project.

You will need to use a computer that has sound capability.

A headset or earphones is preferred.

The survey will take approximately 25 minutes.

Your answers will be recorded onto the floppy disk and will be imported directly into a database. Nothing will be loaded or saved onto your computer's hard drive.

To begin:

Insert both the cd and the “floppy” disk into the computer.

Go to the drive of the cd .

Double click on “Survey.exe”

A screen will appear asking you to enter an area number and a disk number.
Please enter:

Area Number: 111

Disk Number: _____

Now click “ok” and the program will begin. Further instructions will be given to you by the moderator, so please have your earphones or headset in place at this time.

You should not pay any attention to **WHAT** each speaker is saying, but rather **HOW** he sounds to you.

Relax and enjoy the survey.

REFERENCES

- Atkins, C. P. (1993, October). Do employment recruiters discriminate on the basis of nonstandard dialect? Journal of Employment Counseling, 30, 108-118.
- Carranza, M. A., & Ryan, E. B. (1975). Evaluative reactions of adolescents toward speakers of standard English and Mexican American accented English. International Journal of the Sociology of Language, 8, 3-102.
- Carver, C. (1989). American regional dialects: A word geography. Ann Arbor, MI: The University of Michigan Press.
- Clark, H. H., & Wilkes-Gibbs, D. (1986). Referring as a collaborative process. Cognition, 22, 1-39.
- Cutler, S. (1985). A trait-based approach to national origin discrimination. Yale Law Journal, 94, 1164-81.
- Ferrill v. The Parker Group, Inc., 168 F. 3rd 468 (11th Cir. 1999).
- Giles, H. (1971). Ethnocentrism and the evaluation of accented speech. British Journal of Social and Clinical Psychology, 10, 137-88.
- Giles, H., & Coupland, J. (Eds.), (1991). Contexts of accommodation: Developments in applied sociolinguistics. Cambridge: Cambridge University Press.
- Giles, H., & Ryan, E. B. (1982). Prolegomena for developing a social psychological theory of language attitudes. In Ryan, E. B., & Giles, H. (Eds.), Attitudes toward language variation: Social and applied contexts (pp. 208-23). London: Arnold.

- Hollandsworth, J. G., Jr., Kazelskis, R., Stevens, J., & Dressel, M. E. (1979). Relative contribution of verbal, articulative, and nonverbal communication to employment decisions in the job interview setting. Personnel Psychology, 32, 359-367.
- Hollandsworth, S. (1999). Is Robert Abel getting away with murder? Texas Monthly, 27, 124-153.
- Kalin, R., & Rayko, D .S. (1978). Discrimination in evaluative judgments against foreign-accented job candidates. Psychological Reports, 43, 1203-9.
- Kennedy, R. B. (1994). The employment interview. Journal of Employment Counseling, 31, 110-114.
- Kinicki, A. J., & Lockwood, C.A. (1985). The interview process: An examination of factors recruiters use in evaluating job applicants. Journal of Vocational Behavior, 26, 117-125.
- Lambert, W. E. (1967). The social psychology of bilingualism. Journal of Social Issues, 23, 91-109.
- Lambert, W. E., Anisfeld, M., & Bogo, N. (1962). Evaluational reactions to accented English speech. Journal of Abnormal and Social Psychology, 65, 223-31.
- Lambert, W. E., Franker, H. & Tucker, G. R. (1966). Judging personality through speech: A French-Canadian example. Journal of Communication, 16, 305-21.
- Lambert, W. E., Hodgson, R., Gardner, R.C., & Sillenbaum, S. (1960). Evaluational reactions to spoken languages. Journal of Abnormal and Social Psychology, 60, 44-51.

- Labov, W. (1966). The social stratification of English in New York City. Washington, DC: Center for Applied Linguistics.
- Labov, W. (1969). The logic of non-standard English. Georgetown Monographs on Language and Linguistics, 22, 1-22.
- Labov, W. (1972). Sociolinguistic patterns. Philadelphia: University of Philadelphia Press.
- Lippi-Green, L. (1994). Accent, standard language ideology, and discriminatory pretext in the courts. Language in Society, 23, 163-98.
- Lippi-Green, L. (1997). English with an accent: Language, ideology, and discrimination in the United States. New York: Routledge.
- Matsuda, M. (1991). Voices of America: Accent, antidiscrimination law, and a jurisprudence for the last reconstruction, Yale Law Journal, 100, 1329-1407.
- Milroy, J., & Milroy, L. (1985). Authority in language: Investigating language prescription and standardisation. London: Routledge.
- Preston, D. R. (1989). Perceptual dialectology. Dordrecht: Foris.
- Preston, D. R., (1993). Folk dialectology. In D. R. Preston (Ed.), American dialect research: An anthology celebrating the 100th anniversary of the American dialect society. Amsterdam, Philadelphia: John Benjamins, 333-78.
- Preston, D. R. (1996). Where the worst English is spoken. In E. Schneider (Ed.), Focus on the USA. Philadelphia: John Benjamins.

Preston, D. R. (1998). A language attitude analysis of regional US Speech: Is Northern US English not friendly enough? In Conde-Silvestre, J. C., & Hernandez-Campoy, J. M. (Eds.), *Variation and linguistic change in English: Diachronic synchronic studies*, Cuadernos de Filología Inglesa, 8.1.

Rickford, J. (1985). Standard and non-standard language attitudes in a Creole continuum. In N. Wolfson & J. Manes (Eds.), Language of inequality (pp. 145-60). Berlin: Mouton.

Rickford, J., & Traugott, E. C. (1985). Symbol of powerlessness and degeneracy, or symbol of solidarity and truth? Paradoxical attitudes toward Pidgins and Creoles. In S. Greenbaum (Ed.), The English language (pp. 252-61). Oxford: Pergamon.

Shuy, R. (1973). Language and success: Who are the judges? In R. W. Bailey & J. L. Robinson (Eds.), Varieties of present-day English. New York: Macmillan.

Smith, R. (1998, November). Nebraska: Standing tall again. National Geographic, 126-7.

Ugbah, S. D., & Evuleocha, S. U. (1992). The importance of written, verbal, and nonverbal communication factors in employment interview decisions. Journal of Employment Counseling, 29, 128-137.